RELEASE ABATEMENT MEASURE COMPLETION REPORT AND PERMANENT SOLUTION STATEMENT

Commercial Property
343-349 Summer Street
Somerville, Massachusetts 01607

RTN 3-33735

August 8, 2017

Prepared for:

351 Summer LLC
c/o The Maggiore Companies
13 Wheeling Avenue
Woburn, Massachusetts

Prepared by:

EnviroTrac Ltd.
2 Merchant Street, Suite 2
Sharon, Massachusetts 02067

A Full Service Environmental Consulting and Contracting Firm

TABLE OF CONTENTS

EnviroTrac Environmental Services

FIGURES

TABLES

APPENDICES

1.0 INTRODUCTION

EnviroTrac Ltd. (EnviroTrac) prepared this Release Abatement Measure Completion (RAMC) Report and Permanent Solution Statement (PSS) on behalf of 351 Summer LLC for the commercial property located at 343-349 Summer Street in Somerville, Massachusetts (the Site). This RAMC/PSS is being submitted to the Massachusetts Department of Environmental Protection (MassDEP) to address Release Tracking Number (RTN) 3-33735 and was prepared in accordance with the requirements of the Massachusetts Contingency Plan (MCP) as set forth at 310 CMR 40.1040, 40.1041, and 40.1056.

On August 8, 2016, EnviroTrac monitored the completion of tests pits excavated by Koster and Sons Construction, Inc. During the test pit activities, an UST was encountered and damaged by the backhoe. As the result of the UST damage, approximately 20-30 gallons of petroleum was released to the surrounding soil. The released petroleum constituted a Sudden Release, which met the MCP two-hour notification criteria. In response to the release, both the MassDEP and the Somerville Fire Department were notified. Upon notification, MassDEP assigned RTN 3-33735 to the release. Further details relating to the release are discussed in **Section 4.0**.

During August and September, 2016 IRA field activities were conducted. The current property owner, 351 Summer LLC, acquired the property on February 6, 2017 from The Dakota Group. An Immediate Response Action Plan and IRA Completion Report for RTN 3-33735 were submitted to MassDEP on March 16, 2017.

Based on the results of a Method 1 Risk Characterization (M1RC), a condition of No Significant Risk (NSR) has been achieved for RTN 3-33735. Other conditions applicable to a Permanent Solution (310 CMR 40.1040(1)) and a Permanent Solution with No Conditions (310 CMR 40.1041(1)) have also been achieved. This PSS is not related to any other Permanent or Temporary Solution Statements and is applicable to the entire Disposal Site; therefore, additional Response Actions are not required for any other portion of the Disposal Site (310 CMR 40.1056(1)(d)).

2.0 AREA AND DISPOSAL SITE DESCRIPTIONS [310 CMR 40.1056(2)(a)]

2.1 Area Description

The Site is comprised of one parcel of land and is located at 343-349 Summer Street in Somerville, Massachusetts. The parcel is identified by the City of Somerville Assessor's Office as Map #25, Block D, Lot #33. A Locus Map is provided as **Figure 1**.

The Site consists of a 0.39 acre irregular-shaped vacant parcel of land located in an area of mixed commercial and residential use. The Massachusetts Bay Transportation Authority (MBTA) Red Line runs directly below the Site within a bedrock tunnel approximately 80 feet below ground surface (bgs). A MBTA Red Line vent structure is located at the southern portion of the parcel.

Historical records indicate that the Site had been the location of residential dwellings and a garage structure.

The Site is bordered by the following:

North: Residential properties
South: Summer Street, beyond which are residential properties.
East: Residential and commercial properties.
West: Veterans of Foreign Wars building/parking lot and commercial properties.

2.2 Disposal Site Description

The Disposal Site for RTN 3-33735 is limited to petroleum-impacted soil in the area of the petroleum release. Based on analytical data, the horizontal extent of the Disposal Site is depicted on the Site Plan (**Figure 2**). The Disposal Site extends vertically from approximately 4 feet below ground surface (bgs) to 10.5 feet bgs.

2.3 Sensitive Receptors

According to the Massachusetts Geographic Information System (MassGIS) and as shown on **Figure 3**, no sensitive receptors are located within 500 feet of the Disposal Site.

Protected Open Spaces are located to the north, northeast, northwest, and southwest of the Disposal Site, the nearest of which is approximately 800 feet north.

The nearest surface water body is Fresh Pond located approximately 1.3 miles southwest of the Disposal Site.

No institutions are located within one-half mile of the Disposal Site.

3.0 RELEASE HISTORY

RTN 3-34098 was issued for a reportable release at 343-349 and 351 Summer Street in Somerville, MA. RTN 3-34098 was initially assigned only for the presence of lead in soil and was amended to add benzo(a)pyrene as a reportable contaminant.

4.0 DESCRIPTION OF RELEASE CONDITIONS [310 CMR 40.0446(4)(a)]

4.1 UST #1

On August 8, 2016, EnviroTrac monitored the completion of test pits excavated by Koster and Sons Construction, Inc. The test pits were completed to investigate the potential presence of an UST on the 343 Summer Street parcel. A historical (1934-1950) Sanborn Insurance Map showed the presence of a "gas tank" on the property and there was no available documentation that the UST had been removed from the property.

A series of trenches, approximately 5 feet wide and 8-9 feet deep were excavated using a backhoe. The locations of the test pit trenches are shown on **Figure 2**.

During the test pit activities, an UST was encountered and damaged by the backhoe. The top of the UST was approximately 2.5 feet bgs. The UST measured 30 inches in diameter and 24 inches in length with a volume capacity of approximately 60 gallons. As the result of the UST

containing oily liquid, approximately 20-30 gallons of liquid petroleum were released to the surrounding soil when the UST was damaged.

In response to the release, both MassDEP and the Somerville Fire Department were notified. MassDEP assigned RTN 3-33735 to the Site. In accordance with a MassDEP-approved IRA, approximately 5 tons of petroleum-impacted soil were excavated by Strategic Environmental Services, LLC (SES) on August 12, 2016, from the vicinity of the damaged UST. The impacted soil was stockpiled on-site and characterized for off-site disposal. On September 23, 2017, the oil-impacted soil was placed in a roll-off container by SES and transported under a Bill of Lading (BOL) to Aggregate Recycling Corporation (ARC) in Eliot, Maine for disposal. Disposal documentation is included in **Appendix A**.

4.2 UST #2

Also on August 12, 2016, during the excavation of impacted soil associated with the UST encountered on August 8, 2016, two small-diameter buried pipes were observed with the excavation. Further excavation in the area of the piping identified a second small UST (UST #2) approximately 6 feet west of the first UST (UST #1). UST #2 was confirmed to be approximately the same size as UST #1 with no evidence of releases or leaks from the UST observed. The contents of both tanks were removed and placed in two (2) 55-gallon drums for off-site disposal. After cleaning, the tanks were removed from the excavation and transported to the James G. Grant Co. tank yard for disposal. A copy of the waste disposal documentation for the drums and tanks are included in **Appendix A**.

4.3 Post-Excavation

Following excavation on August 12, 2016, eight (8) post-excavation soil samples, representative of the extent of the excavation in the vicinity of the two USTs, were collected by EnviroTrac. The location of the soil samples (S-1 through S-8) are shown on **Figure 2**. The soil samples were placed into clean, appropriately-preserved glassware and transported under a chain of custody to SGS Accutest Laboratories (SGS) of Marlborough, Massachusetts. Each soil sample was analyzed for extractable petroleum hydrocarbons (EPH) and volatile petroleum hydrocarbons (VPH) using the MassDEP methods. The laboratory results are summarized in **Table 1**. Copies of the laboratory reports are included in **Appendix B**.

As summarized in **Table 1**, five (5) EPH target analytes were present at concentrations exceeding their MCP RCS-1 reportable concentrations for soil; however, the sudden release of oil which required an IRA was assessed and remediated to the extent necessary to stabilize Site conditions. As such, an IRA Plan (IRAP) and IRA Completion (IRAC) Report was submitted to MassDEP on March 16, 2017. The IRAP and IRAC Report concluded that further MCP Preliminary or Comprehensive Response Actions were necessary to achieve a condition of no significant risk and a permanent solution.

5.0 DESCRIPTION OF RELEASE ABATEMENT MEASURE [310 CMR 40.0446(4)(b)]

A Release Abatement Measure (RAM) Plan was submitted to MassDEP for RTNs 3-33735 and 3-34098 on June 21, 2017. The RAM Plan was required to manage potentially impacted soil during redevelopment of the Site. During construction on June 26, 2017, additional excavation was conducted in the area of the former USTs, which is described in the following section.

5.1 Summary Of Assessment and/or Response Actions Completed [310 CMR 40.0446(4)(c)]

On June 26, 2017, EnviroTrac returned to the Site to conduct additional soil excavation and sampling in the area of the former USTs. Under EnviroTrac supervision, Rhino Construction of Acton, Massachusetts dug an excavation measuring approximately 17 feet by 17 feet to a depth of 10.5 feet bgs. Soil was screened during the excavation using a photoionization detector (PID) equipped with a 10.6 electron volt lamp calibrated with an isobutylene standard to read as benzene in accordance with the MassDEP jar headspace method. PID readings ranged from below the instrument detection limit (BDL) of 0.5 parts per million by volume (ppmv) to 161 ppmv.

Soil was excavated and removed under the direction of EnviroTrac based on visual and olfactory evidence and/or PID readings. Approximately 35.4 tons of soil was live loaded from the excavation and transported to ARC under a BOL. Disposal documentation is provided as **Appendix C**.

Six (6) confirmatory end point soil samples were collected following the excavation at approximately 10.5 feet bgs. Soil samples S-9 through S-14 were collected in clean, appropriately-preserved glassware and were transported under a chain of custody to SGS. Each sample was analyzed for EPH. Soil sample locations are depicted on **Figure 2**. Laboratory results are summarized in **Table 1**. A copy of the laboratory report is provided in **Appendix B**.

As summarized in **Table 1**, concentrations of EPH and target analytes in soil samples collected on June 26, 2017 are below applicable Method 1 soil standards.

6.0 DISPOSAL SITE CHARACTERIZATION

6.1 Soil and Groundwater Classification

6.1.1 Groundwater Classification

The Disposal Site is not located within a Current or Potential Drinking Water Source Area; therefore, groundwater at the Disposal Site is not classified as GW-1. Future use of the Disposal Site will include occupied buildings and depth to groundwater is less than 15 feet; therefore, groundwater is classified as GW-2. Groundwater at the Disposal Site and surrounding areas is a potential source of discharge to surface water bodies and is therefore classified as GW-3. Thus, the groundwater classification applicable to the Disposal Site is GW-2 and GW-3.

6.1.2 Soil Classification

Three categories of soil are defined in the MCP at 310 CMR 40.0933 based on accessibility of soil to potential receptors and frequency and intensity of use within the Disposal Site. Based on current use and activities, the primary human receptors are adult and children trespassers with a low frequency, low intensity. Based on foreseeable use of the Site, adult and child visitors may be present at the Disposal Site with a high frequency of use at a high intensity. Construction, utility, and environmental workers may also be present at the Disposal Site with a low frequency of use at a high intensity.

The accessibility of soil is dependent on the depth of soil and whether it underlies pavement, a building, or other permanent structure. Based on the MassDEP soil category selection matrix found at 310 CMR 40.0933(9), the S-1 category applies to the Disposal Site.

In summary, based on the foregoing and the current and foreseeable Disposal Site activities and use, soil is classified as S-1/GW-2 and S-1/GW-3.

6.2 Contaminants of Concern

Soil analytical data obtained from soil samples collected on August 12, 2016 and June 26, 2017 are summarized in **Table 1**. Based on detections at any concentration, Contaminants of Concern (COCs) identified in soil include:

- C9-C18 Aliphatics
- C19-C36 Aliphatics
- C11-C22 Aromatics
- Acenaphthene
- Acenaphthylene
- Anthracene
- **Benzo(a)anthracene**
- **Benzo(a)pyrene**
- **Benzo(b)fluoranthene**
- Benzo(g,h,i)perylene
- Benzo(k)fluoranthene
- Chrysene
- **Dibenz(a,h)anthracene**
- Fluoranthene
- Fluorene
- **Indeno(1,2,3-cd)pyrene**
- 2-methylnaphthalene
- Phenanthrene
- Pyrene

Compounds that were detected at concentrations above applicable Method 1 soil standards are in **bold**.

7.0 CONCEPTUAL SITE MODEL [310 CMR 40.1056(2)(b)]

To assess the potential for human and/or environmental receptors to be exposed to identified COCs, all reasonable Exposure Points were identified and potential migration pathways from each source to each Exposure Point were identified using a descriptive Conceptual Site Model (CSM).

7.1 Site Description and Source of Impacts

As described in **Section 2.0**, the Site is located in an area of mixed commercial and residential use in Somerville, Massachusetts. The source of impacts related to RTN 3-33735 is from a release of petroleum from an UST. No off-site sources of petroleum hydrocarbons or other ongoing sources affecting the Disposal Site were identified.

8.0 EXPOSURE ASSESSMENT

8.1 Environmental Fate and Transport Characteristics

The behavior of COCs in the environment is dependent on numerous factors, including the physical properties of the compound itself and the physical, chemical, and biological properties of the media to which they are released. At the Disposal Site, petroleum was released to the excavation. As a result of Response Actions completed for RTN 3-33735, soil data document migration of petroleum has not occurred and is not likely to occur from residually impacted soil remaining at the Site. Based on the absence of contaminant migration and the limited vertical extent of the Disposal Site, no preferential pathway via subsurface utilities at or near the Site was identified.

8.2 Identification of Migration Pathways

At the Disposal Site, petroleum was released to the subsurface. As a result of Response Actions completed, soil data shows that migration of petroleum has not occurred and is not likely to occur from residually impacted soil remaining at the Site. Based on the absence of contaminant migration and the limited vertical extent of the Disposal Site, no preferential pathway via subsurface utilities at or near the Site was identified.

Groundwater was not encountered during excavation and no other evidence of the likelihood of impact to groundwater was observed during remedial activities; therefore, vadose zone and saturated zone transport were not identified as migration pathways.

Since the redevelopment of the Site is ongoing, the nearest occupied structures from the Disposal Site are approximately 100 feet east and north. Current or potential impacts to indoor air at nearby properties is not likely since the COCs identified at the Disposal Site are not volatile. As such, partitioning to air is not a migration pathway.

In summary, no migration pathways were identified.

8.3 Current and Potential Receptors

As described in the M1RC (**Section 9.0**) and summarized in **Table 2**, soil Exposure Point Concentrations (EPCs) meet applicable Method 1 S-1 standards, which is protective of all current and future uses by all current and potential receptors.

8.4 Current and Potential Environmental and Ecological Receptors

As depicted in **Figure 3**, no environmental receptors are located within 500 feet of the Disposal Site; therefore, no current or potential environmental receptors were identified.

At the Disposal Site, wildlife exposure to petroleum-impacted soil, which is located in a developed urban area, is not expected. The Disposal Site is also not expected to provide significant habitat for wildlife since the Site is developed and vehicle and pedestrian traffic is likely to deter wildlife presence.

8.5 Potential Future Use [310 CMR 40.1056(1)(e), (f), and (g)]

The MCP requires consideration of unrestricted future use in a risk characterization unless an AUL or other limitations, assumptions, or conditions are placed on the Disposal Site to restrict future Disposal Site uses. Unrestricted future use includes an assumption that the Site will be used for residential purposes.

Possible future residents include adults and children continually present over long periods of time. Residential exposures were assumed under all current and foreseeable Disposal Site activities and use, which is protective of all current and future receptors.

Based on the approach described above and the results of the M1RC (**Section 9.0**), an AUL is not required as part of this PSS nor is this PSS based upon assumptions about the current and future activities, uses, or conditions. Finally, this PSS is not based upon the effective operation of one or more Active Exposure Pathway Mitigation Measures.

8.6 Exposure Point Concentrations

Groundwater, indoor air, and surface water were not identified as exposure points; therefore, no EPCs were developed.

The locations of soil samples S-1 through S-8 were excavated and removed on June 26, 2017; therefore, these soil samples were not included in the calculation of EPCs. Soil samples S-9 through S-14 are considered representative of current conditions. The maximum concentration of each COC was conservatively utilized as Disposal Site EPCs.

As summarized in **Table 2**, all soil EPCs meet Method 1 soil standards.

9.0 METHOD 1 RISK CHARACTERIZATION

The risk characterization documented in this PSS was conducted to evaluate the risk to human health, public welfare, safety, and the environment that may be posed by the release at the Disposal Site. This risk characterization was completed in accordance with the requirements set forth in MCP at 310 CMR 40.0900 and is based on current and foreseeable Site activities and uses. The extent of contamination resulting from the release of petroleum is limited to soil; therefore, it is appropriate to utilize the Method 1 approach to characterize risk to human health.

9.1 Characterization of Risk of Harm to Human Health

A limited volume of soil was affected by the release and remediated. Based on laboratory results of post-excavation soil samples and conservative EPCs, COCs meet applicable Method 1 soil standards (**Table 2**). As a result, a condition of No Significant Risk (NSR) to human health has been achieved at the Site for all soil-related exposures under unrestricted future Site conditions.

Based on visual observations made at the Disposal Site during Response Actions and soil data obtained, impact to groundwater as a result of this release has not occurred.

9.2 Characterization of Risk of Harm to Public Welfare

No nuisance odors resulting from the petroleum release were evident following excavation in August 2016 and June 2017 and COCs at the Site are not likely to produce nuisance odors during potential future uses.

Use of the Site for livestock is not anticipated. The Site has not produced the loss of active or passive use of the property and no non-pecuniary effects are expected. Further, the area of impact is not expected to negatively impact the usefulness of the Site and the Site has not degraded the resources of the community; therefore, a condition of NSR to Public Welfare has been achieved at the Site.

9.3 Characterization of Risk of Harm to Safety

Conditions of risk of harm to safety as defined by the MCP, including conditions that will pose a threat of physical harm or bodily injury to people were not identified on-site. No rusted or corroded drums or containers, no weakened berms, and no explosive vapors resulting from the release of oil or hazardous materials (OHM) were detected or observed at the Site. No unsecured pits, ponds, lagoons, or other dangerous structures, or any uncontained materials were identified at the Site for the storage of reactive chemicals. There are no open or ongoing excavations at the Site and Remediation Waste generated during Response Actions was disposed of off-site appropriately; therefore, a condition of NSR of harm to safety exists at the Site.

9.4 Characterization of Risk of Harm to the Environment

No current or potential environmental or ecological receptors were identified; therefore, a condition of NSR to the environment was attained at the Site.

10.0 SOURCE CONTROL AND CONTROL OF SUBSURFACE MIGRATION [310 CMR 40.1056(2)(c) and (d)]

The source of impacts to the Disposal Site is from the former petroleum UST. No other ongoing sources of COCs have been identified; therefore all known unpermitted releases and sources of COCs to the environment are considered eliminated.

As stated in **Section 8.2**, groundwater was not encountered and no migration pathways were identified.

11.0 LIGHT NONAQUEOUS PHASE LIQUID MOBILITY [310 CMR 40.1056(2)(3)]

Light non-aqueous phase liquid (LNAPL) was not encountered in monitoring wells at the Disposal Site; therefore the requirements to demonstrate that Response Actions have been taken to adequately assess and control LNAPL mobility and meet the requirements of 310 CMR 40.1003(7)(a) are not applicable to the Disposal Site.

12.0 UPPER CONCENTRATION LIMITS [310 CMR 40.1056(1)(j)]

Concentrations of oil and hazardous materials do not exceed any applicable upper concentration limits in soil, as documented in **Table 2**.

13.0 OPERATION, MAINTENANCE, AND/OR MONITORING [310 CMR 40.1056(2)(l)]

The conditions at the Disposal Site which this PSS is based upon do not require any operation, maintenance, and/or monitoring to confirm and/or maintain those conditions.

14.0 FEASIBILITY EVALUATION [310 CMR 40.1056(2)(g)]

As required by 310 CMR 40.860(e), an evaluation of the feasibility of reducing the concentrations of OHM at the Site to levels that achieve or approach background was conducted. EnviroTrac evaluated the feasibility to approach background conditions as part of this PSS as outlined below. This evaluation was conducted in accordance with MassDEP Policy #WSC-04-160 - *Conducting Feasibility Evaluations under the MCP*. This policy presents the MassDEP position related to conditions of categorical feasibility to achieve background conditions, conditions of categorical infeasibility to achieve background conditions and conditions which meet the definition of approaching background.

EnviroTrac reviewed Site conditions, Response Actions completed, conditions of categorical feasibility and infeasibility, and conditions approaching Background as outlined in MassDEP Policy #WSC-04-160. Based on these evaluations, the following conclusions are presented:

- Of the 19 COCs identified in **Section 6.2**, six are described as degradable (non-persistent) contaminants, as defined in 310 CMR 40.1514(4). As described in Section 9.3.2.3 of Policy #WSC-04-160, achieving or approaching background can be deemed infeasible for degradable/non-persistent contaminants;
- 2-methylnaphthalene is not described as persistent or non-persistent; however, methyl naphthalene (an isomer of 2-methylnapthalene) is listed as a non-persistent compound;
- The remaining 11 COCs are also not described as persistent or non-persistent; however, background is considered approached since the concentration of remaining COC at each sampling location is at or below the Method 1 S-1 standard (Section 9.3.3.2 of Policy #WSC-04-160), and;
- The M1RC documents Site conditions meet a condition of NSR.

Based on conclusions described above, additional Response Actions to reach Background are not required.

15.0 DATA USEABILITY AND REPRESENTATIVENESS EVALUATION [310 CMR 40.1056(1)(k) and (2)(k)]

A Representative Evaluation (as set forth at 310 CMR 40.1056(2)(k)) is included in this document pursuant to the Response Action Performance Standard to ensure the adequacy of analytical and other assessment data used to support this PSS. In evaluating the adequacy of the data, the Site's historical use, local hydrogeologic conditions, physical characteristics, and

field observations were considered in conjunction with laboratory analytical data to determine whether spatial and temporal data collected during Disposal Site Response Actions are sufficient to support this PSS. The Representative Evaluation was prepared in accordance with MassDEP Policy #WSC-07-350 – *MCP Representativeness Evaluations and Data Usability Assessments*.

15.1 CSM Summary

The Disposal Site is located in an area of mixed commercial and residential use in Somerville, Massachusetts. The source of impacts related to RTN 3-33735 is from a release of petroleum from an UST. Impacts were limited to subsurface soil in an unpaved area, the horizontal extent of which is depicted on **Figure 2**. The vertical extent of the Disposal Site extends approximately from 4 feet bgs to 10.5 feet bgs. Groundwater was not encountered during Response Actions and was not impacted by the petroleum release.

15.2 Use of Field Screening Data

Within the Disposal Site, soil samples were screened using a PID equipped with a 10.6 electron-volt lamp and calibrated with an isobutylene standard gas to read as benzene. The calibrated PID was employed using the MassDEP Jar Headspace Analytical Screening Procedure to generate screening values for each soil sample. PID screening results were used to guide impacted soil removal during excavation.

15.3 Sampling Rationale – Number, Spatial Distribution, and Handling of Samples

A total of five (5) soil samples were collected from the release area and were screened using a PID to demonstrate the present and/or absence of petroleum. Based on PID screening results, 14 soil samples were collected from the interpreted extent of necessary excavation. Based on laboratory results and EPCs, COCs meet applicable Method 1 soil standards (**Table 2**). With respect to field quality assurance/quality control (QA/QC), all samples were collected using standard operating procedures and managed under a chain of custody.

15.4 Temporal Distribution of Samples

No known ongoing or uncontrolled source of contamination remains at the Site. Soil data obtained in August 2016 and June 2017 conservatively reflect current Disposal Site conditions.

15.5 Completeness

The soil data obtained in August 2016 and June 2017 is sufficient to characterize Disposal Site conditions related to RTN 3-33735. No significant data gap was identified.

15.6 Inconsistency and Uncertainty

Based on investigations conducted, no inconsistency or uncertainty with the potential to change the conclusions of this PSS were identified.

15.7 Information Considered Unrepresentative

Soil EPCs were developed using data obtained subsequent to the promulgation of the Compendium of Analytical Methods (CAM) by MassDEP. No information considered unrepresentative was identified.

15.8 Data Usability Assessment

The MCP, as set forth at 310 CMR 40.0017 and 40.0191(2)(c), requires that analytical and environmental monitoring data be scientifically valid and defensible, and of a level of precision and accuracy commensurate with its stated or intended use, taking into consideration relevant policies and guidelines issued by MassDEP and the U.S. Environmental Protection Agency, including the CAM. 310 CMR 40.0017(3)(i) further provides that all submittals document any known conditions or findings which may affect the validity of analytical data, including unsatisfactory data obtained for blank, duplicate, surrogate or spiked samples. As documented herein, the analysis of soil samples collected in August 2016 and June 2017 were completed using analytical methods published by MassDEP. With respect to field QA/QC, all samples were collected using standard operating procedures and managed under a chain of custody. The laboratory data met requirements applicable to analyses set forth in the CAM, with the following exceptions noted by the laboratory:

August 12, 2017 soil samples

- The soil to methanol ratio for soil sample S-7 was greater than 0.75 to 1. This condition does not affect data usability.
- The surrogate recovery of o-terphenyl for the EPH analysis of soil sample S-3 was outside control limits due to matrix interference, which was confirmed by reanalysis. The surrogate recovery was above the control limits; therefore, a high bias should be assumed for applicable analytes. The location of soil sample S-3, however, was subsequently excavated on June 26, 2017, which means this exception does not affect the risk characterization results or the overall conclusions of this PSS.
- For C11-C22 aromatics, the aromatic breakthrough of the blank spike (BS) and BS Duplicate (BSD) for QC sample OP48449 exceeded the 5% method limit, which was confirmed by re-fractionation. All soil samples, however, were subsequently excavated on June 26, 2017, which means this exception does not affect the risk characterization or the overall conclusions of this PSS.
- For C9-C18 aliphatics and C19-C36 aliphatics, the relative percent difference of the BSD recovery for QC sample OP48449 was outside of control limits; however, the laboratory noted that the range recovery was satisfactory. As such, this exception does not affect the analytical results.

15.8.1 Data Usability Conclusion

Based on the foregoing, a review of field practices, and a review of the laboratory reports, it is the opinion of the Licensed Site Professional named herein that the analytical data obtained from samples collected during investigations associated with RTN 3-33735 are scientifically valid and defensible, and of a sufficient level of precision, accuracy, and completeness to support this PSS.

16.0 MANAGEMENT OF REMEDIATION WASTE [310 CMR 40.0446(4)(e)]

As described in **Sections 4.1** and **4.2**, approximately 5 tons of petroleum-impacted soil and two 55-gallon drums were generated during excavation of UST #1 and UST #2 on August 8 and August 12, 2016. Disposal documentation is provided in **Appendix A**.

As described in **Section 5.1**, approximately 35.4 tons of soil was transported off-site following additional excavation at the former location of UST #1. Disposal documentation is provided in **Appendix C**.

17.0 FINDINGS AND CONCLUSIONS OF THE PERMANENT SOLUTION

Based on Response Actions completed, EnviroTrac concludes the following:

- A release of approximately 20-30 gallons of petroleum from an UST impacted subsurface soil at the Site, constituting a reportable release under the MCP.
- MassDEP was notified of the release on August 8, 2016 and verbally authorized an IRA consisting of excavation of up to 5 tons of impacted soil. Two 55-gallon drums of oil/water material was also generated.
- Post-excavation soil samples from August 12, 2016 exhibited concentrations of EPH target analytes above MCP RCS-1 reportable concentrations.
- Additional excavation in the former UST area was conducted on June 26, 2017. Approximately 35.4 tons of soil was excavated and disposed of off-site. Post-excavation soil samples were below applicable MCP Method 1 soil standards.
- Soil EPCs meet applicable MCP Method 1 soil standards.
- Remediation Waste was properly managed off-site.
- A Permanent Solution was attained at the Disposal Site.
- No conditions, including AULs, are required to achieve and maintain a condition of NSR.

18.0 FINDINGS AND CONCLUSIONS OF THE RAM [310 CMR 40.0446(4)(d) & (f)]

Based upon Response Actions completed to date, the objectives of the RAM were achieved as summarized below:

- A RAM Plan was required to manage potentially impacted soil related to RTN 3-33735 during construction for Site redevelopment.
- During construction, additional soil was excavated from the former location of the damaged UST removed from the Disposal Site in August 2016.
- Approximately 35.4 tons of soil was excavated from the former UST location and disposed of off-site.
- Post-excavation soil samples exhibited COC concentrations below Method 1 soil standards.
- The RAM is considered complete since the objectives and all active and ongoing Remedial Actions related to the RAM were completed on June 26, 2017.

19.0 PUBLIC NOTIFICATION CORRESPONDENCE [310 CMR 40.1403(d), (f), & (h), 40.1406, and 40.0446]

In accordance with 310 CMR 40.1403(3) and 40.0446, written notice regarding the availability of this PSS and RAMC has been provided to the Mayor and the Board of Health for Somerville, Massachusetts.

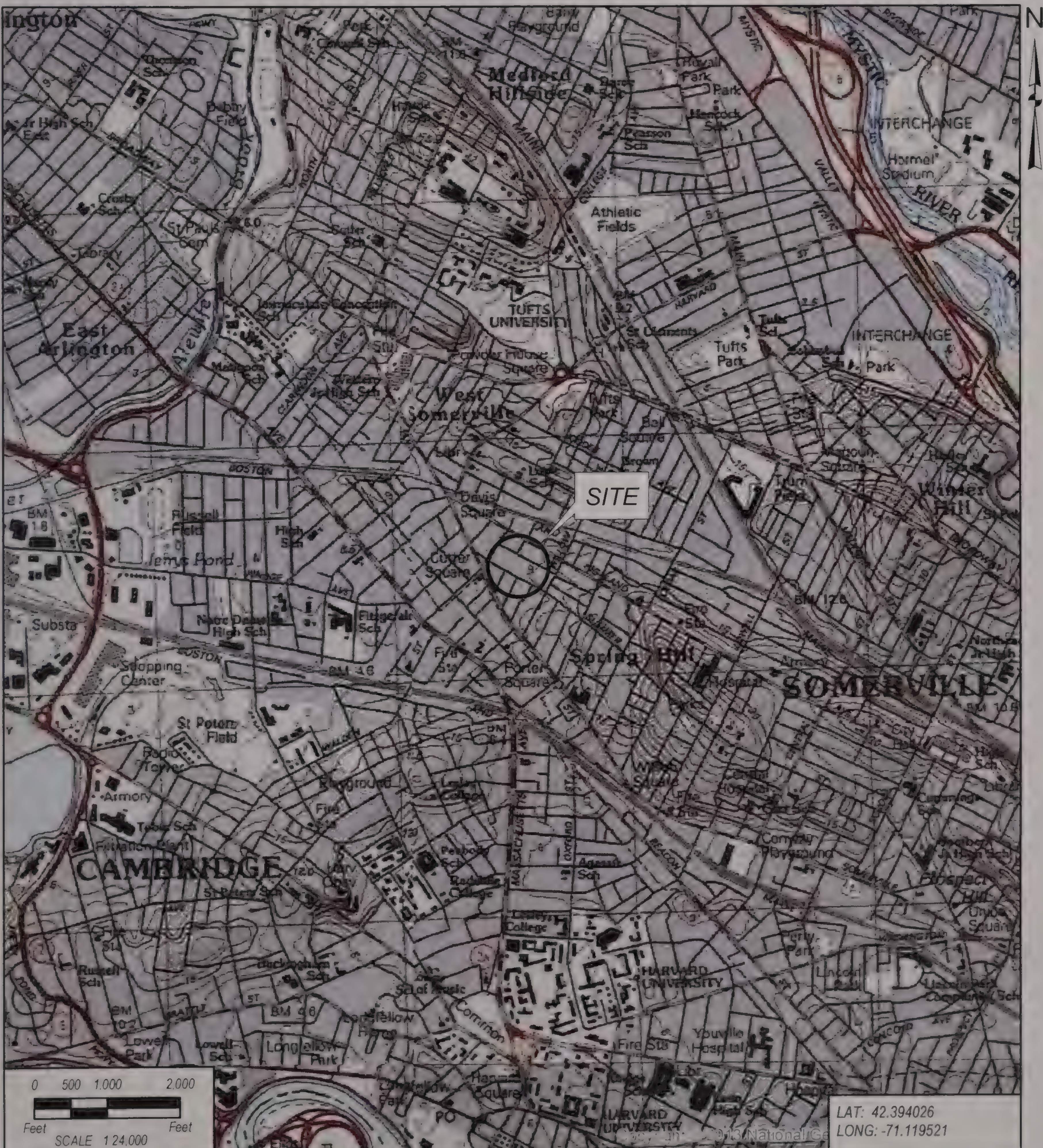
351 Summer LLC is the only property owner within the Disposal Site boundary, therefore, no notifications required under 310 CMR 40.1403(10) are required.

Copies of the public notice letters are provided in **Appendix D**.

In accordance with 310 CMR 40.1403(9)(c)(5), a written summary and response to public comments on the RAM Plan is included as **Appendix E**.

FIGURES

EnviroTrac
Environmental Services



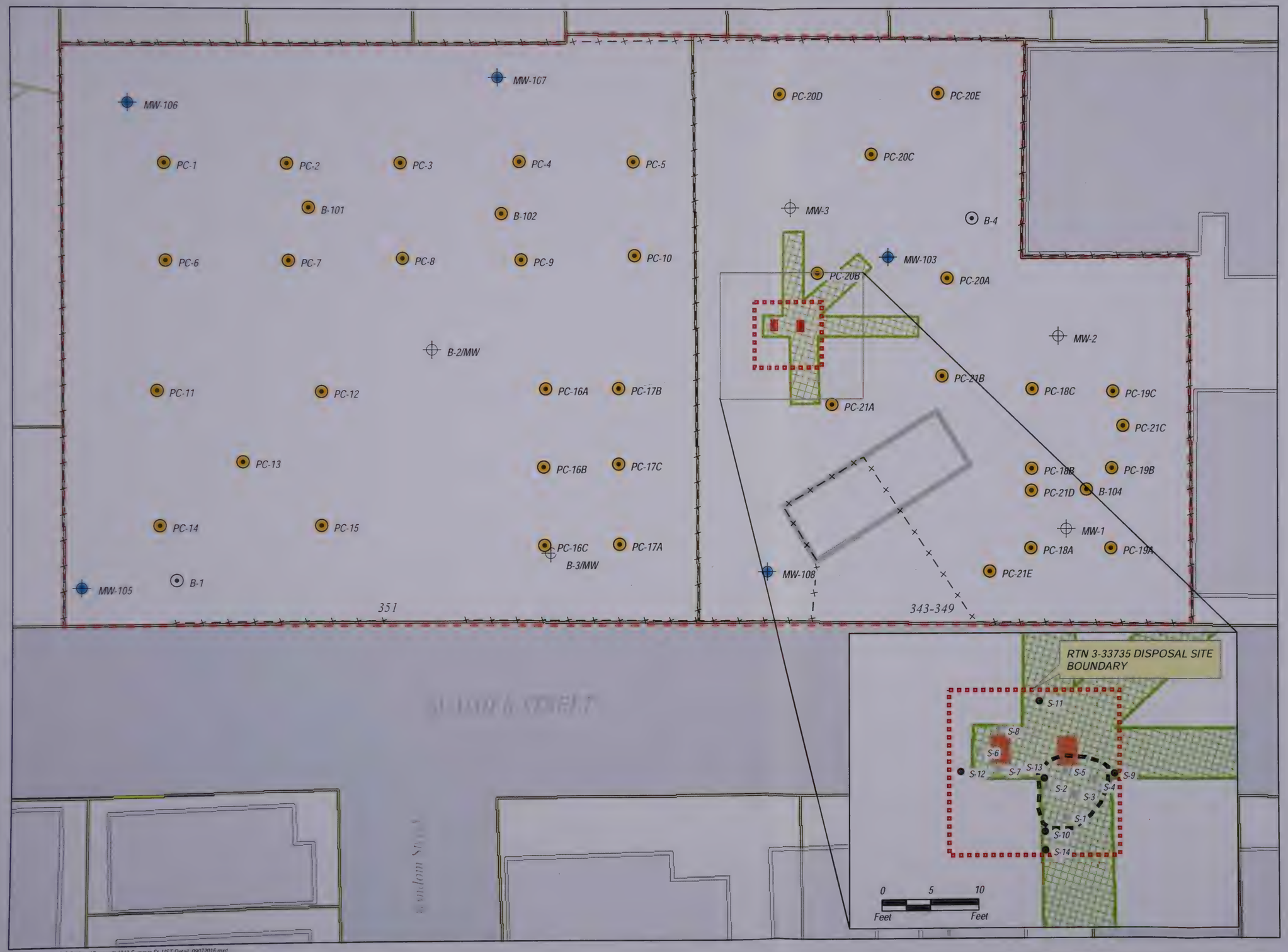
SOURCE: OFFICE OF GEOGRAPHIC INFORMATION (MassGIS), COMMONWEALTH OF MASSACHUSETTS, MassIT
USGS TOPOGRAPHIC MAPS: BOSTON NORTH AND BOSTON SOUTH, MA QUADRANGLES

EnviroTrac
Environmental Services
2 Merchant Street, Suite 2
Sharon, Massachusetts 02067
P: (781) 793-0074
F: (781) 793-7877
www.EnviroTrac.com

LOCUS MAP

343 - 351 SUMMER STREET
SOMERVILLE, MASSACHUSETTS

DRAWN BY	PROJECT	DATE	FIGURE
RHB	03.990202.00	9/1/2016	1



LEGEND

- 343-351 PROPERTY BOUNDARY
- FENCE
- MBTA VENT
- UST RAM EXCAVATION
- FORMER UST LOCATION
- TEST PITS
- SOIL BORING
- MONITORING WELL
- HISTORIC SOIL BORING
- EXISTING MONITORING WELL

UST SOIL SAMPLES

- REMAINING
- EXCAVATED
- UST IRA EXCAVATION

Data Source: Office of Geographic Information (MassGIS), Commonwealth of Massachusetts, MassIT.

0 25 50
Feet Feet
APPROXIMATE SCALE

REVISED BY: RHB
REVISION DATE: 8/7/2017

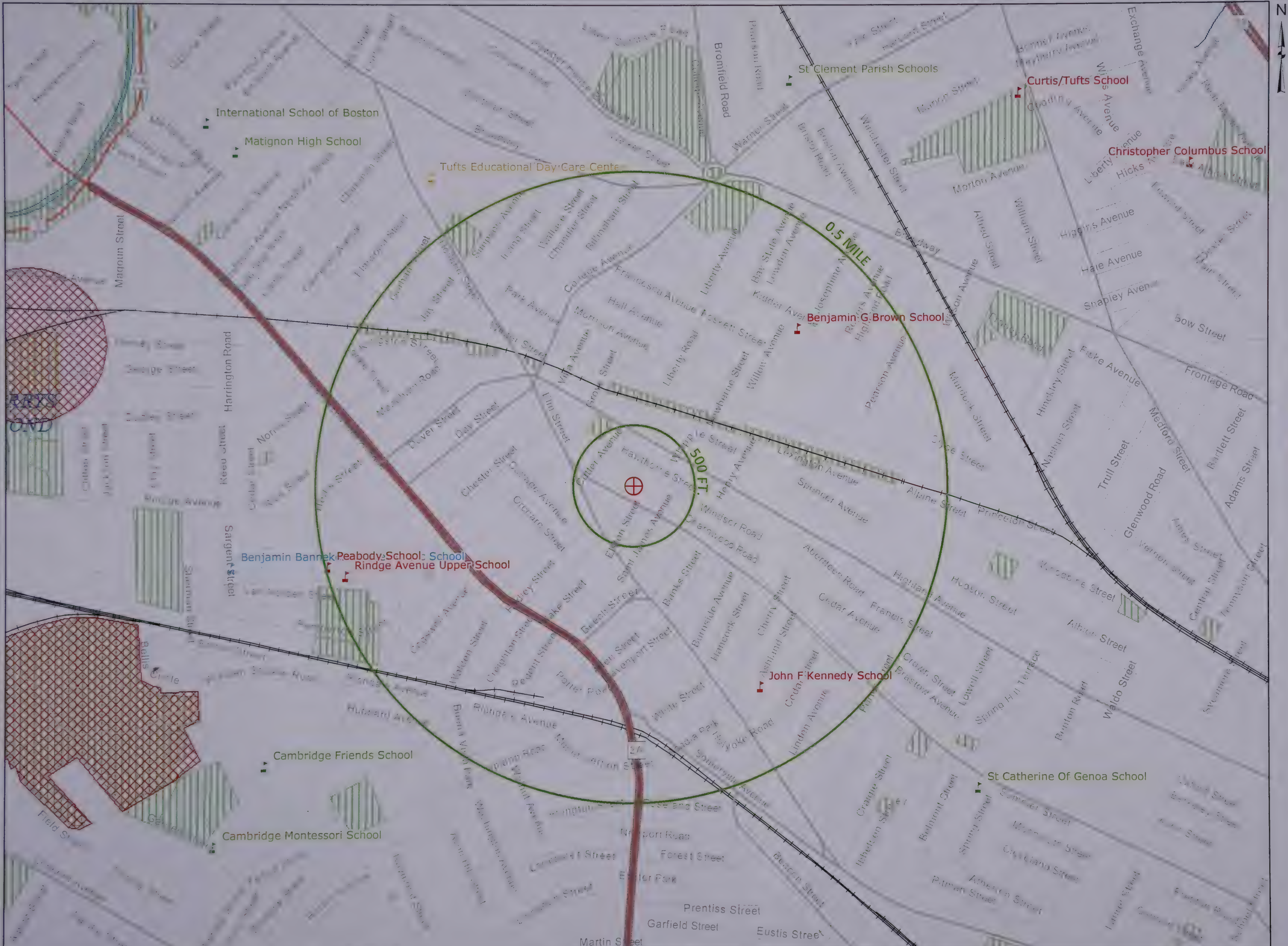
FIGURE 2

SITE PLAN

351 SUMMER LLC
343-349 SUMMER STREET
SOMERVILLE, MASSACHUSETTS

EnviroTrac
Environmental Services

Document Path: C:\GIS Projects\Somerville\343 Summer St_UST Detail_09072016.mxd



LEGEND

Railroads
Pipeline
Pipeline Arbitrary Extension
Solid Waste Landfills
EPA Sole Source Aquifer
NHESP Priority Habitats of Rare Species
NHESP Certified Vernal Pools
ACECs
Protected Open Space

Roads
Limited Access Highway
Multi-lane Hwy, not limited access
Other Numbered Highway
Major Road, Collector
Minor Road, Arterial

USGS Hydrography
Perennial Stream
Intermittent Stream
Shoreline
Ditch/Canal
Aqueduct
Dam

DEP Wetlands
Marsh/Bog
Wooded Marsh
Cranberry Bog
Salt Marsh
Open Water
Reservoir (with PWSID)
Tidal Flats
Beach/Dune

Public Water Supplies
Community Groundwater Source
Surface Water Intake
Non-Community Groundwater Source
Emergency Surface Water
DEP Approved Zone IIs
Interim Wellhead Protection Areas
Surface Water Supply Zone A

Non-Potential Drinking Water Source Areas
High-Yield
Medium-Yield

Potentially Productive Aquifers
High-Yield
Medium-Yield

Data Source: Office of Geographic Information (MassGIS), Commonwealth of Massachusetts, MassIT.

0 800 1,600
Feet Feet
APPROXIMATE SCALE

REVISED BY: RHB
REVISION DATE: 7/31/2017

FIGURE
3

MassGIS PRIORITY RESOURCE MAP
500 foot and 0.5 mile Radii

343 - 351 SUMMER STREET
SOMERVILLE, MASSACHUSETTS

EnviroTrac
Environmental Services

TABLES

EnviroTrac
Environmental Services

TABLE 1
SUMMARY OF SOIL DATA

Commercial Property
343-351 Summer Street
Somerville, Massachusetts

Sample Date	August 12, 2016								June 26, 2017						MCP Method 1 Soil Standards (mg/kg)		MCP Method 3 Upper Concentration Limits (mg/kg)
Sample ID	S-1	S-2	S-3	S-4	S-5	S-6	S-7	S-8	S-9	S-10	S-11	S-12	S-13	S-14	S-1		
Depth (feet)	8-9	8	8.5	7-8	7	5	6	6	10.5	10.5	10.5	10.5	10.5	10.5			
PID (ppmv)	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	GW-2	GW-3	
VOLATILE PETROLEUM HYDROCARBONS (mg/kg)																	
C5- C8 Aliphatics	<5.7	<5.4	<5.0	<5.1	<5.7	<5.8	<9.1	<5.2	--	--	--	--	--	--	100	100	5,000
C9- C12 Aliphatics	<5.7	<5.4	<5.0	<5.1	<5.7	<5.8	<9.1	<5.2	--	--	--	--	--	--	1,000	1,000	20,000
C9- C10 Aromatics	<5.7	<5.4	<5.0	<5.1	<5.7	<5.8	<9.1	<5.2	--	--	--	--	--	--	100	100	5,000
Benzene	<0.28	<0.27	<0.25	<0.26	<0.29	<0.29	<0.46	<0.26	--	--	--	--	--	--	40	40	10,000
Ethylbenzene	<0.28	<0.27	<0.25	<0.26	<0.29	<0.29	<0.46	<0.26	--	--	--	--	--	--	500	500	10,000
Methyl Tert Butyl Ether	<0.057	<0.054	<0.050	<0.051	<0.057	<0.058	<0.091	<0.052	--	--	--	--	--	--	100	100	5,000
Naphthalene	<0.28	<0.27	<0.25	<0.26	<0.29	<0.29	<0.46	<0.26	--	--	--	--	--	--	20	500	10,000
Toluene	<0.28	<0.27	<0.25	<0.26	<0.29	<0.29	<0.46	<0.26	--	--	--	--	--	--	500	500	10,000
Total Xylenes	<0.56	<0.54	<0.50	<0.52	<0.58	<0.58	<0.92	<0.52	--	--	--	--	--	--	100	500	10,000
EXTRACTABLE PETROLEUM HYDROCARBONS (mg/kg)																	
C9-C18 Aliphatics	<8.8	<9.5	11.7	<8.9	<9.1	13.4	10.3	<9.4	188	<11	<11	<11	<11	245	1,000	1,000	20,000
C19-C36 Aliphatics	76.6	<19	95.3	<18	64.9	488	380	226	<22	<21	<22	<21	<22	108	3,000	3,000	20,000
C11-C22 Aromatics	142	<19	655	<18	161	294	171	128	79.3	<21	<22	<21	<22	<23	1,000	1,000	10,000
Acenaphthene	0.6	<0.47	1.7	<0.44	0.7	<0.46	<0.46	<0.47	<0.54	<0.53	<0.54	<0.53	<0.56	<0.56	1,000	1,000	10,000
Acenaphthylene	<0.44	<0.47	2.5	<0.44	<0.45	<0.46	<0.46	<0.47	<0.54	<0.53	<0.54	<0.53	<0.56	<0.56	600	10	10,000
Anthracene	1.7	<0.47	11.9	<0.44	1.9	<0.46	<0.46	<0.47	<0.54	<0.53	<0.54	<0.53	<0.56	<0.56	1,000	1,000	10,000
Benzo(a)anthracene	5.2	<0.47	28.1	<0.44	6.2	<0.46	<0.46	0.7	<0.54	<0.53	<0.54	<0.53	<0.56	<0.56	7	7	3,000
Benzo(a)pyrene	4.8	<0.47	19.2	<0.44	5.5	<0.46	<0.46	0.9	<0.54	<0.53	<0.54	<0.53	<0.56	<0.56	2	2	300
Benzo(b)fluoranthene	4.5	<0.47	28.2	<0.44	5.9	<0.46	<0.46	0.6	<0.54	<0.53	<0.54	<0.53	<0.56	<0.56	7	7	3,000
Benzo(g,h,i)perylene	2.9	<0.47	9.6	<0.44	3.4	<0.46	<0.46	0.8	<0.54	<0.53	<0.54	<0.53	<0.56	<0.56	1,000	1,000	10,000
Benzo(k)fluoranthene	3.9	<0.47	10.8	<0.44	2.9	<0.46	<0.46	0.6	<0.54	<0.53	<0.54	<0.53	<0.56	<0.56	70	70	10,000
Chrysene	5.0	<0.47	23.6	<0.44	5.5	<0.46	<0.46	0.7	<0.54	<0.53	<0.54	<0.53	<0.56	<0.56	70	70	10,000
Dibenz(a,h)anthracene	1.0	<0.47	3.8	<0.44	1.2	<0.46	<0.46	<0.47	<0.54	<0.53	<0.54	<0.53	<0.56	<0.56	0.7	0.7	300
Fluoranthene	10.5	<0.47	55.7	<0.44	12.5	<0.46	<0.46	1.4	<0.54	<0.53	<0.54	<0.53	<0.56	<0.56	1,000	1,000	10,000
Fluorene	0.7	<0.47	4.7	<0.44	0.8	<0.46	<0.46	<0.47	<0.54	<0.53	<0.54	<0.53	<0.56	<0.56	1,000	1,000	10,000
Indeno(1,2,3-cd)pyrene	2.9	<0.47	11.4	<0.44	3.4	<0.46	<0.46	<0.47	<0.54	<0.53	<0.54	<0.53	<0.56	<0.56	7	7	3,000
2-Methylnaphthalene	<0.44	<0.47	<0.47	<0.44	<0.45	<0.46	<0.46	<0.47	1.4	<0.53	<0.54	<0.53	<0.56	<0.56	80	300	5,000
Naphthalene	<0.44	<0.47	<0.47	<0.44	<0.45	<0.46	<0.46	<0.47	<0.54	<0.53	<0.54	<0.53	<0.56	<0.56	20	500	10,000
Phenanthrene	6.7	<0.47	44.5	<0.44	9.1	<0.46	<0.46	0.8	<0.54	<0.53	<0.54	<0.53	<0.56	<0.56	500	500	10,000
Pyrene	7.9	<0.47	39.2	<0.44	9.5	<0.46	<0.46	1.1	<0.54	<0.53	<0.54	<0.53	<0.56	<0.56	1,000	1,000	10,000

NOTES:

– is analysis not performed.
NE is not established.
ND is not detected.
mg/kg is milligrams per kilogram.
PID is photoionization detector

ppmv is parts per million by volume.
<2.0 indicates not detected at or above the laboratory reporting limit of 2.0 mg/kg.
Analytes detected above the method reporting limit are in **Bold**.
Analytes detected above applicable MCP Soil Standards are in **Red**.

EnviroTrac
Environmental Services

TABLE 2
SUMMARY OF SOIL EXPOSURE POINT CONCENTRATIONS

Commercial Property
343-351 Summer Street
Somerville, Massachusetts

Sample Date	June 26, 2017						MCP Method 1 Soil Standards (mg/kg)		MCP Method 3 Upper Concentration Limits (mg/kg)	MassDEP Background Concentration (mg/kg)	Detections (mg/kg)		All Samples (mg/kg)			EPC
Sample ID	S-9	S-10	S-11	S-12	S-13	S-14	S-1				Minimum	Maximum	Maximum	Mean	Median	
Depth (feet)	10.5	10.5	10.5	10.5	10.5	10.5										
PID (ppmv)	BDL	BDL	BDL	BDL	BDL	BDL	GW-2	GW-3								
EXTRACTABLE PETROLEUM HYDROCARBONS (mg/kg)																
C9-C18 Aliphatics	**188**	<11	<11	<11	<11	**245**	1,000	1,000	20,000	NE	**188**	**245**	**245**	**75.8**	**5.5**	**245**
C19-C36 Aliphatics	<22	<21	<22	<21	<22	**108**	3,000	3,000	20,000	NE	**108**	**108**	**108**	**27**	**11**	**108**
C11-C22 Aromatics	**79.3**	<21	<22	<21	<22	<23	1,000	1,000	10,000	NE	**79.3**	**79**	**79.3**	**22.3**	**11**	**79.3**
Acenaphthene	<0.54	<0.53	<0.54	<0.53	<0.56	<0.56	1,000	1,000	10,000	0.5	ND	ND	**0.3**	**0.3**	**0.3**	ND
Acenaphthylene	<0.54	<0.53	<0.54	<0.53	<0.56	<0.56	600	10	10,000	0.5	ND	ND	**0.3**	**0.3**	**0.3**	ND
Anthracene	<0.54	<0.53	<0.54	<0.53	<0.56	<0.56	1,000	1,000	10,000	1	ND	ND	**0.3**	**0.3**	**0.3**	ND
Benzo(a)anthracene	<0.54	<0.53	<0.54	<0.53	<0.56	<0.56	7	7	3,000	2	ND	ND	**0.3**	**0.3**	**0.3**	ND
Benzo(a)pyrene	<0.54	<0.53	<0.54	<0.53	<0.56	<0.56	2	2	300	2	ND	ND	**0.3**	**0.3**	**0.3**	ND
Benzo(b)fluoranthene	<0.54	<0.53	<0.54	<0.53	<0.56	<0.56	7	7	3,000	2	ND	ND	**0.3**	**0.3**	**0.3**	ND
Benzo(g,h,i)perylene	<0.54	<0.53	<0.54	<0.53	<0.56	<0.56	1,000	1,000	10,000	1	ND	ND	**0.3**	**0.3**	**0.3**	ND
Benzo(k)fluoranthene	<0.54	<0.53	<0.54	<0.53	<0.56	<0.56	70	70	10,000	1	ND	ND	**0.3**	**0.3**	**0.3**	ND
Chrysene	<0.54	<0.53	<0.54	<0.53	<0.56	<0.56	70	70	10,000	2	ND	ND	**0.3**	**0.3**	**0.3**	ND
Dibenz(a,h)anthracene	<0.54	<0.53	<0.54	<0.53	<0.56	<0.56	0.7	0.7	300	0.5	ND	ND	**0.3**	**0.3**	**0.3**	ND
Fluoranthene	<0.54	<0.53	<0.54	<0.53	<0.56	<0.56	1,000	1,000	10,000	4	ND	ND	**0.3**	**0.3**	**0.3**	ND
Fluorene	<0.54	<0.53	<0.54	<0.53	<0.56	<0.56	1,000	1,000	10,000	1	ND	ND	**0.3**	**0.3**	**0.3**	ND
Indeno(1,2,3-cd)pyrene	<0.54	<0.53	<0.54	<0.53	<0.56	<0.56	7	7	3,000	1	ND	ND	**0.3**	**0.3**	**0.3**	ND
2-Methylnaphthalene	**1.4**	<0.53	<0.54	<0.53	<0.56	<0.56	80	300	5,000	0.5	**1.4**	**1.4**	**1.4**	**0.5**	**0.3**	**1.4**
Naphthalene	<0.54	<0.53	<0.54	<0.53	<0.56	<0.56	20	500	10,000	0.5	ND	ND	**0.3**	**0.3**	**0.3**	ND
Phenanthrene	<0.54	<0.53	<0.54	<0.53	<0.56	<0.56	500	500	10,000	3	ND	ND	**0.3**	**0.3**	**0.3**	ND
Pyrene	<0.54	<0.53	<0.54	<0.53	<0.56	<0.56	1,000	1,000	10,000	4	ND	ND	**0.3**	**0.3**	**0.3**	ND

NOTES:

-- is analysis not performed.
NE is not established.
ND is not detected.
mg/kg is milligrams per kilogram.
PID is photoionization detector.
EPC is Exposure Point Concentration.
ppmv is parts per million by volume.
<2.0 indicates not detected at or above the laboratory reporting limit of 2.0 mg/kg.
Analytes detected above the method reporting limit are in **Bold**.
Analytes detected above applicable MCP soil standards are in **Red**.

EnviroTrac

APPENDIX A

EnviroTrac
Environmental Services

The Commonwealth of Massachusetts

Department of Fire Services – Office of the State Fire Marshal

RECEIPT OF DISPOSAL OF UNDERGROUND STEEL STORAGE TANK FORMERLY CONTAINING MOTOR FUEL

NAME AND ADDRESS OF APPROVED TANK YARD: James G Grant Co
R.28 Wolcott St
Readville, MA 02137

Approved tank yard no. 008 Tank Yard Ledger 502 CMR 3.03(3) Number: 2016-56896-A

I certify under penalty of law I have personally examined the underground steel storage tank delivered to this "approved tank yard" by (firm, corporation or partnership) Strategic Env
and accepted same in conformance with Office of the State Fire Marshal Regulations 502 CMR 3.00 Provisions for Approving Underground Steel Storage Tank Dismantling Yards. A valid permit was issued by the head of the **LOCAL** fire department FDID# 17274 to transport this tank to this yard.

Name and official title of approved tank yard owner or owners authorized representative:

Signature: Bryan Nunes Title: Mng. Date signed: 8-12-16

TANK DATA:	**TANK REMOVED FROM:**
Gallons: 60	No. and Street: 343 Summer St.
Previous contents: #2	City and Town: Somerville
Diameter: -	Fire Dept. Permit #:
Length: -	Notes:
Date Received: 8-12-16	
Serial # (if available):	
Tank I.D. # (Form FP-290):	

EACH TANK MUST HAVE A RECEIPT OF DISPOSAL

Owner/Operator to mail revised copy of Notification Form (FP290, or FP290R) to:

Department of Environmental Protection
Bureau of Waste Prevention - UST Program
P.O. Box 120-0165
Boston, MA 02112-0165

This signed receipt of disposal must be returned to the head of the local fire department.

The Commonwealth of Massachusetts

Department of Fire Services – Office of the State Fire Marshal

RECEIPT OF DISPOSAL OF UNDERGROUND STEEL STORAGE TANK FORMERLY CONTAINING MOTOR FUEL

NAME AND ADDRESS OF APPROVED TANK YARD: James G Grant Co
R.28 Wolcott St
Readville, MA 02137

Approved tank yard no. 008 Tank Yard Ledger 502 CMR 3.03(3) Number: 2016-56896-B

I certify under penalty of law I have personally examined the underground steel storage tank delivered to this "approved tank yard" by (firm, corporation or partnership) Strategic Env
and accepted same in conformance with Office of the State Fire Marshal Regulations 502 CMR 3.00 Provisions for Approving Underground Steel Storage Tank Dismantling Yards. A valid permit was issued by the head of the **LOCAL** fire department FDID# 17274 to transport this tank to this yard.

Name and official title of approved tank yard owner or owners authorized representative:

Signature: Bryan Nunes Title: Mgr. Date signed: 8-12-16

TANK DATA:	**TANK REMOVED FROM:**
Gallons: 60	No. and Street: 343 Summer St.
Previous contents: #2	City and Town: Somerville
Diameter: -	Fire Dept. Permit #:
Length: -	Notes:
Date Received: 8-12-16	
Serial # (if available):	
Tank I.D. # (Form FP-290):	

EACH TANK MUST HAVE A RECEIPT OF DISPOSAL

Owner/Operator to mail revised copy of Notification Form (FP290, or FP290R) to:

Department of Environmental Protection
Bureau of Waste Prevention - UST Program
P.O. Box 120-0165
Boston, MA 02112-0165

This signed receipt of disposal must be returned to the head of the local fire department.

Massachusetts Department of Environmental Protection
Bureau of Waste Site Cleanup

BILL OF LADING (pursuant to 310 CMR 40.0030)

BWSC 112

Release Tracking Number
3 - 33735

A. LOCATION OF SITE OR DISPOSAL SITE WHERE REMEDIATION WASTE WAS GENERATED:

1. Release Name/Location Aid: FORMER GASOLINE SERVICE STATION

2. Street Address: 343 SUMMER STREET

3. City/Town: SOMERVILLE 4. Zip Code:

☐ 5. Check here if the disposal site that is the source of the release is Tier Classified. Check the current Tier Classification Category.
☐ a. Tier I ☐ b. Tier ID ☐ c. Tier II

B. THIS FORM IS BEING USED TO: (check one: B1-B4):

☐ 1. Submit a **Bill of Lading (BOL)** to transport Remediation Waste to Temporary Storage or a Receiving Facility.
Response Actions associated with this BOL (check all that apply):

☐ a. Immediate Response Action (IRA)
☐ b. Release Abatement Measure (RAM)
☐ c. Downgradient Property Status (DPS)
☐ d. Utility Release Abatement Measure (URAM)
☐ e. Comprehensive Response Actions
☐ f. Limited Removal Action (LRA): (must be retained pursuant to 310 CMR 40.0034(6); can't be submitted via eDEP)
☐ g. Other

☐ 2. Submit an Attestation of Completion of **Shipment to Temporary Storage** (Sections C, F and J are not required):
☑ 3. Submit an Attestation of **Completion of Shipment to a Receiving Facility** (Sections C, F and J are not required):
☐ 4. Certify that Remediation Waste Was **Not Shipped, and the Bill of Lading is Void**. (Sections C, D, E, and F are not required)

5. Date Bill of Lading submitted to the Department: 9/20/2016 (mm/dd/yyyy) b. eDEP Transaction ID: 863720

6. Period of Generation Associated with this Bill of Lading 8/8/2016 (mm/dd/yyyy) to 8/12/2016 (mm/dd/yyyy)

(All sections of this transmittal form must be filled out unless otherwise noted above)

The Bill of Lading is not considered complete until the Attestation of Completion of Shipment is received by the Department.

C. DESCRIPTION OF WASTE AND WASTE SOURCE:

1. Contaminated Media/Debris (check all that apply):

☐ a. Soil ☐ b. Groundwater ☐ c. Surface Water ☐ d. Sediment ☐ e. Vegetation or Organic Debris

☐ f. Demolition/Construction Waste ☐ g. Inorganic Absorbent Materials ☐ h. Other:

2. Uncontainerized Waste (check all that apply):

☐ a. Inorganic Absorbent Materials ☐ b. Other:

C. DESCRIPTION OF WASTE AND WASTE SOURCE (cont.):

3. Containerized Waste (check all that apply):

☐ a. Tank Bottoms/Sludges ☐ b. Containers ☐ c. Drums ☐ d. Engineered Impoundments

☐ e. Other: _____

4. Estimated Quantity: _____ ☐ Tons ☐ Cu. Yds. ☐ Gallons

5. Contaminant Source (check one):

☐ a. Transportation Accident ☐ b. Underground Storage Tank ☐ c. Brownfields Redevelopment

☐ d. Other: _____

6. Type of Contaminant (check all that apply):

☐ a. Gasoline ☐ b. Diesel Fuel ☐ c. #2 Fuel Oil ☐ d. #4 Fuel Oil ☐ e. #6 Fuel Oil ☐ f. Jet Fuel

☐ g. Waste Oil ☐ h. Kerosene ☐ i. Chlorinated Solvents ☐ j. Urban Fill ☐ k. Other: _____

7. Constituents of Concern (check all that apply):

☐ a. As ☐ b. Cd ☐ c. Cr ☐ d. Pb ☐ e. Hg ☐ f. EPH/TPH ☐ g. VPH

☐ h. PCBs ☐ i. VOCs ☐ j. SVOCs ☐ k. Other: _____

8. If applicable, check the box for the Reportable Concentration Category of the site:

☐ a. RCS-1 ☐ b. RCS-2 ☐ c. RCGW-1 ☐ d. RCGW-2

9. Remediation Waste Characterization Documentation (check at least one):

☐ a. Site History Information ☐ b. Sampling Analytical Methods and Procedures ☐ c. Laboratory Data

☐ d. Field Screening Data ☐ e. Characterization Documentation previously submitted to the Department

i. Date submitted: _____ (mm/dd/yyyy) ii. Type of Documentation: _____

D. TRANSPORTER OR COMMON CARRIER INFORMATION:

1. Transporter/Common Carrier Name: STRATEGIC ENVIRONMENTAL SER.

2. Contact First Name: MICHAEL 3. Last Name: RUGGIERI

4. Street: 362 PUTNAM HILL ROAD 5. Title: PROJECT MANAGER

6. City/Town: SUTTON 7. State: MA 8. Zip Code: 015900000

9. Telephone: 5087577782 10. Ext: _____ 11. Email: _____

E. RECEIVING FACILITY/TEMPORARY STORAGE LOCATION:

1. Operator/Facility Name: AGGREGATE RECYCLING CORP.
2. Contact First Name: JOHN 3. Last Name: DOHERTY
4. Street: 434 DOW HIGHWAY 5. Title: CEO
6. City/Town: ELIOT 7. State: ME 8. Zip Code: 039030000
9. Telephone: 2074395584 10. Ext: 11. Email:
12. Type of facility: (check one)

a. Temporary Storage i. Period of Temporary Storage _____ (mm/dd/yyyy) to _____ (mm/dd/yyyy)

ii. Reason for Temporary Storage: _____

☐ b. Asphalt Batch/Hot Mix ☐ c. Landfill/Disposal ☐ d. Landfill/Structural Fill ☐ e. Landfill/Daily Cover

☑ f. Asphalt Batch/Cold Mix ☐ g. Thermal Processing ☐ h. Incinerator ☐ i. Other: _____

13. Division of Hazardous Waste/Class A Permit Number: NA
14. Division of Solid Waste Permit Number: S-021818-WK-B-N
15. EPA Identification Number: NA

F. LSP SIGNATURE AND STAMP:

I attest under the pains and penalties of perjury that I have personally examined and am familiar with this submittal form, including any and all documents accompanying this submittal. In my professional opinion and judgment based upon application of (i) the standard of care in 309 CMR 4.02(1), (ii) the applicable provisions of 309 CMR 4.02(2) and (3), and 309 CMR 4.03(2), and (iii) the provisions of 309 CMR 4.03(3), to the best of my knowledge, information and belief, the assessment action(s) undertaken to characterize the Remediation Waste which is (are) the subject of this submittal for acceptance at the facility identified in this submittal comply with applicable provisions of 310 CMR 40.0000, and such facility is permitted to accept Remediation Waste having the characteristics described in this submittal.

I am aware that significant penalties may result, including, but not limited to, possible fines and imprisonment, if I submit information which I know to be false, inaccurate or materially incomplete.

1. LSP #: 8972
2. First Name: ROBERT H 3. Last Name: BIRD
4. Telephone: 5082447111 5. Ext: 6. Email:
7. Signature: _____
8. Date: _____ (mm/dd/yyyy)
9. LSP Stamp:

Massachusetts Department of Environmental Protection
Bureau of Waste Site Cleanup

BILL OF LADING (pursuant to 310 CMR 40.0030)

BWSC 112

Release Tracking Number
3 - 33735

G. PERSON SUBMITTING BILL OF LADING:

1. Check all that apply: ☐ a. change in contact name ☐ b. change of address ☐ c. change in the person undertaking response actions

2. Name of Organization: THE DAKOTA PARTNERS LLC

3. Contact First Name: MARC 4. Last Name: DIAGLE

5. Street: 1264 MAIN STREET 6. Title:

7. City/Town: WALTHAM 8. State: MA 9. Zip Code: 024510000

10. Telephone: 6175946132 11. Ext: 12. Email:

H. RELATIONSHIP TO SITE OF PERSON SUBMITTING BILL OF LADING:

☐ Check here to change relationship

☑ 1. RP or PRP ☐ a. Owner ☐ b. Operator ☐ c. Generator ☐ d. Transporter

☑ e. Other RP or PRP Specify: NON-SPECIFIED PRP

☐ 2. Fiduciary, Secured Lender or Municipality with Exempt Status (as defined by M.G.L. c. 21E, s. 2)

☐ 3. Agency or Public Utility on a Right of Way (as defined by M.G.L. c. 21E, s. 5(j))

☐ 4. Any Other Person Undertaking Response Actions: Specify Relationship:

I. REQUIRED ATTACHMENT AND SUBMITTALS:

☐ 1. Check here if the Response Action(s) on which this opinion is based, if any, are (were) subject to any order(s), permit(s) and/or approvals issued by DEP or EPA. If the box is checked, you must attach a statement identifying the applicable provisions thereof.

☐ 2. Check here if any non-updatable information provided on this form is incorrect, e.g. Release Address/Location Aid. Send corrections to BWSC.eDEP@state.ma.us

☐ 3. Check here to certify that the LSP Opinion containing the material facts, data, and other information is attached.

J. CERTIFICATION OF PERSON SUBMITTING BILL OF LADING:

1. I, _____, attest under the pains and penalties or perjury (i) that I have personally examined and am familiar with the information contained in this submittal, including any and all documents accompanying this transmittal form, (ii) that, based on my inquiry of those individuals immediately responsible for obtaining the information, the material information contained in this submittal is, to the best of my knowledge and belief, true, accurate and complete, and (iii) that I am fully authorized to make this attestation on behalf of the entity legally responsible for this submittal. I/the person or entity on whose behalf this submittal is made am/is aware that there are significant penalties, including, but not limited to, possible fines and imprisonment, for willfully submitting false, inaccurate, or incomplete information.

2. By: 3. Title:

4. For: THE DAKOTA PARTNERS LLC 5. Date:
(Name of person or entity recorded in Section G) (mm/dd/yyyy)

Massachusetts Department of Environmental Protection
Bureau of Waste Site Cleanup

BILL OF LADING (pursuant to 310 CMR 40.0030)

BWSC 112

Release Tracking Number
3 - 33735

J. CERTIFICATION OF PERSON SUBMITTING BILL OF LADING (cont.) :

☐ 6. Check here if the address of the person providing certification is different from address recorded in Section G.

7. Street: _____

8. City/Town: _____ 9. State: _____ 10. Zip Code: _____

11. Telephone: _____ 12. Ext: _____ 13. Email: _____

YOU ARE SUBJECT TO AN ANNUAL COMPLIANCE ASSURANCE FEE OF UP TO $10,000 PER BILLABLE YEAR FOR THIS DISPOSAL SITE. YOU MUST LEGIBLY COMPLETE ALL RELEVANT SECTIONS OF THIS FORM OR DEP MAY RETURN THE DOCUMENT AS INCOMPLETE. IF YOU SUBMIT AN INCOMPLETE FORM, YOU MAY BE PENALIZED FOR MISSING A REQUIRED DEADLINE.

Date Stamp (MassDEP USE ONLY):

Received by DEP on 9/27/2016 3:00:09 PM

Massachusetts Department of Environmental Protection
Bureau of Waste Site Cleanup

BWSC 112A

BILL OF LADING (pursuant to 310 CMR 40.0030)

Release Tracking Number
3 - 33735

SUMMARY OF SHIPMENT SHEET 1 **OF** 1

A. SUMMARY OF SHIPMENT (To be filled out by the receiving facility upon receipt of Remediation Waste):

1. Date of Shipment: (mm/dd/yyyy)	2. Date of Receipt: (mm/dd/yyyy)	3. Number of Loads Shipped:	4. Daily Volume Shipped: ☐ yds3 ☑ tons ☐ gals
9/23/2016	9/23/2016	1	4.77
5. Totals Recorded on this Summary of Shipment Sheet:		1	4.77

NON-HAZARDOUS WASTE MANIFEST

1. Generator ID Number

2. Page 1 of 1

3. Emergency Response Phone

4. Waste Tracking Number 1 6 0 5 2 1

5. Generator's Name and Mailing Address

The Dakota Partners LLC
1284 Main Street
Waltham MA 02451
Generator's Phone: 617 - 594 - 6032

Attn: Marc Daigle

Generator's Site Address (if different than mailing address)

The Dakota Partners LLC
343 Summer Street
Somerville MA

6. Transporter 1 Company Name

DH Recovery Corporation

U.S. EPA ID Number

MAD 0 6 5 6 2 9 1 6 0 3

7. Transporter 2 Company Name

U.S. EPA ID Number

8. Designated Facility Name and Site Address

VEXOR Technology Inc
955 West Smith Road
Medina OH 44256
Facility's Phone: 330 - 721 - 9773

U.S. EPA ID Number

OHD 0 7 7 7 7 2 8 9 5

	9. Waste Shipping Name and Description	10. Containers No.	10. Containers Type	11. Total Quantity	12. Unit Wt./Vol.
1	Non-DOT/Non RCRA Regulated VEX_____ Oily Solids DSRO 144746 144747	002	DM	700	P
2					
3	M/D 112344				
4.					

13. Special Handling Instructions and Additional Information

1)VEX# 31551 Oily solids

14. GENERATOR'S/OFFEROR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations.

Generator's Offeror's Printed/Typed Name: Marc DAIGLE — Signature — Month 9 Day 20 Year 16

15. International Shipments ☐ Import to U.S. ☐ Export from U.S. Port of entry/exit:

Transporter Signature (for exports only): Date leaving U.S.:

16. Transporter Acknowledgment of Receipt of Materials

Transporter 1 Printed/Typed Name: Ray Crum — Signature — Month 09 Day 20 Year 16

Transporter 2 Printed/Typed Name — Signature — Month Day Year

17. Discrepancy

17a. Discrepancy Indication Space ☐ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection

Manifest Reference Number:

17b. Alternate Facility (or Generator) — U.S. EPA ID Number

Facility's Phone:

17c. Signature of Alternate Facility (or Generator) — Month Day Year

18. Designated Facility Owner or Operator: Certification of receipt of materials covered by the manifest except as noted in Item 17a

Printed/Typed Name: Tim Brien — Signature — Month 10 Day 05 Year 16

GENERATOR — TRANSPORTER INT'L — DESIGNATED FACILITY

APPENDIX B

SGS ACCUTEST
New England

08/25/16

SGS ACCUTEST IS PART OF SGS, THE WORLD'S LEADING INSPECTION, VERIFICATION, TESTING AND CERTIFICATION COMPANY.

e-Hardcopy 2.0
Automated Report

Technical Report for

EnviroTrac

Maggiore Somerville, 343 - 351 Summer Street, Somerville, MA

03.990202.00

SGS Accutest Job Number: MC47325

Sampling Date: 08/12/16

Report to:

EnviroTrac

denat@envirotrac.com

ATTN: Dena Tomassi

Total number of pages in report: 119

NELAP ACCREDITED TNI LABORATORY

Test results contained within this data package meet the requirements of the National Environmental Laboratory Accreditation Program and/or state specific certification programs as applicable.

H. (Brad) Madadian
Lab Director

Client Service contact: Robert Soll 508-481-6200

Certifications: MA (M-MA136,SW846 NELAC) CT (PH-0109) NH (250210) RI (00071) ME (MA00136) FL (E87579) NY (11791) NJ (MA926) PA (6801121) ND (R-188) CO MN (11546AA) NC (653) IL (002337) WI (399080220) DoD ELAP (L-A-B L2235)

Test results relate only to samples analyzed.

Table of Contents

Sections

Table of Contents

Sections

SGS ACCUTEST

Sample Summary

EnviroTrac

Job No: MC47325

Maggiore Somerville, 343 - 351 Summer Street, Somerville, MA
Project No: 03.990202.00

Sample Number	Collected Date	Time By	Received	Matrix Code	Matrix Type	Client Sample ID
MC47325-1	08/12/16	10:00 FM	08/16/16	SO	Soil	S-1
MC47325-2	08/12/16	11:15 FM	08/16/16	SO	Soil	S-2
MC47325-3	08/12/16	12:00 FM	08/16/16	SO	Soil	S-3
MC47325-4	08/12/16	11:00 FM	08/16/16	SO	Soil	S-4
MC47325-5	08/12/16	12:30 FM	08/16/16	SO	Soil	S-5
MC47325-6	08/12/16	12:35 FM	08/16/16	SO	Soil	S-6
MC47325-7	08/12/16	13:00 FM	08/16/16	SO	Soil	S-7
MC47325-8	08/12/16	13:15 FM	08/16/16	SO	Soil	S-8
MC47325-9	08/12/16	14:00 FM	08/16/16	SO	Soil	STOCKPILE

Soil samples reported on a dry weight basis unless otherwise indicated on result page.

SGS ACCUTEST

SAMPLE DELIVERY GROUP CASE NARRATIVE

Client: EnviroTrac **Job No:** MC47325

Site: Maggiore Somerville, 343 - 351 Summer Street, Somerville, MA **Report Date** 8/25/2016 3:16:44 PM

9 Sample(s), 0 Trip Blank(s) and 0 Field Blank(s) were collected on 08/12/2016 and were received at SGS Accutest New England on 08/16/2016 properly preserved, at 2.6 Deg C and intact. These Samples received a job number of MC47325. A listing of the Laboratory Sample ID, Client Sample ID and dates of collection are presented in the Results Summary Section of this report

Except as noted below, all method specified calibrations and quality control performance criteria were met for this job. For more information, please refer to QC summary pages

Volatiles by GCMS By Method SW846 8260C

Matrix: SO **Batch ID:** MSL4331

- All samples were analyzed within the recommended method holding time
- All method blanks for this batch meet method specific criteria
- MSL4331-BS/BSD for 2-Butanone (MEK), Bromomethane: Outside control limits. Associated samples are non-detect for this compound
- MSL4331-BS/BSD for Dichlorodifluoromethane, 1,4-Dioxane (BSD only) are outside MCP criteria
- Continuing calibration check standard MSL4331-CC4322 for 1,4-dioxane exceed 20% Difference
- The response factor (RF) for the 2-Butanone and Acetone low point (0.046 and 0.046) and average point (0.046 and 0.044) in the initial calibration MSL4322-ICC4322 are less than the required RF of 0.1 as noted in Table 4 of SW846 8260C
- Continuing calibration check standard MSL4331-CC4322 for dichlorodifluoromethane, chloromethane, vinyl chloride, bromomethane, chloroethane, trichlorofluoromethane, 2,2-dichloropropane exceed 20% Difference (response biased high) Associated samples are non-detect for this compound
- Quadratic regression is employed for initial calibration standard MSL4322-ICC4322 for bromomethane, chloroethane, m,p-xylene

Extractables by GCMS By Method SW846 8270D

Matrix: SO **Batch ID:** OP48454

- All samples were extracted within the recommended method holding time
- All samples were analyzed within the recommended method holding time
- All method blanks for this batch meet method specific criteria
- MC47325-9: Elevated RL due to dilution required for matrix interference
- MC47325-9 for Nitrobenzene-d5, 2,4,6-Tribromophenol: Outside control limits due to matrix interference compounded by dilution
- RPD(s) for 4-Chloroaniline are outside control limits Individual spike recoveries within in-house acceptance limits
- OP48454-BSD for Aniline, 4-Chloroaniline, 3,3'-Dichlorobenzidine are outside MCP criteria
- OP48454-BS for 3,3'-Dichlorobenzidine are outside MCP criteria
- Quadratic regression is employed for initial calibration standard MSW1188-ICC1188 for Benzoic acid, Hexachlorocyclopentadiene, 2,4-Dinitrotoluene, 2,4,6-Tribromophenol, Pentachlorophenol
- Continuing calibration check standard MSW1189-CC1188 for Benzoic acid exceed 20% Difference (response biased high) Associated samples are non-detect for this compound
- Initial calibration verification MSW1188-ICV1188 for 2,4-Dinitrophenol, Benzoic acid exceed 30% Difference (response biased high)

Volatiles by GC By Method MADEP VPH REV 1.1

Matrix: SO **Batch ID:** GAB5243

- All samples were analyzed within the recommended method holding time.
- All method blanks for this batch meet method specific criteria
- MC47325-7: Soil to methanol ratio less than 0.75 to 1.

Extractables by GC By Method MADEP EPH REV 1.1

Matrix: SO **Batch ID:** OP48449

- All samples were extracted within the recommended method holding time
- All samples were analyzed within the recommended method holding time
- All method blanks for this batch meet method specific criteria
- MC47325-9 for 1-Chlorooctadecane: Outside control limits due to possible matrix interference
- OP48449-BS/BSD for C11-C22 Aromatics (Unadj.): Aromatic breakthrough (naphthalene and/or 2-methylnaphthalene) exceeded 5% method limit Results confirmed by refractionation
- RPD(s) for OP48449-BSD for C9-C18 Aliphatics, C19-C36 Aliphatics: Range recovery satisfactory
- MC47325-3 for o-Terphenyl: Outside control limits due to matrix interference. Confirmed by reanalysis

Extractables by GC By Method SW846 8082A

Matrix: SO **Batch ID:** OP48455

- All samples were extracted within the recommended method holding time
- All samples were analyzed within the recommended method holding time
- All method blanks for this batch meet method specific criteria

Metals By Method SW846 6010C

Matrix: SO **Batch ID:** MP26648

- All samples were digested within the recommended method holding time
- All samples were analyzed within the recommended method holding time
- All method blanks for this batch meet method specific criteria.
- Sample(s) MC47344-1PS, MC47344-1SDL were used as the QC samples for metals
- RPD(s) for Serial Dilution for Beryllium, Cadmium, Silver are outside control limits for sample MP26648-SD1 Percent difference acceptable due to low initial sample concentration (< 50 times IDL)
- MC47325-9 for Silver: Elevated RL due to dilution required for matrix interference

Metals By Method SW846 7471B

Matrix: SO **Batch ID:** MP26651

- All samples were digested within the recommended method holding time
- All samples were analyzed within the recommended method holding time
- All method blanks for this batch meet method specific criteria

Wet Chemistry By Method EPA 120.1M

Matrix: SO **Batch ID:** GN54598

- All samples were analyzed within the recommended method holding time
- All method blanks for this batch meet method specific criteria

Wet Chemistry By Method SW846 CHAP7

Matrix: SO	Batch ID: GP20744

- All samples were distilled within the recommended method holding time
- All samples were analyzed within the recommended method holding time
- All method blanks for this batch meet method specific criteria

Matrix: SO	Batch ID: GP20745

- All samples were distilled within the recommended method holding time
- All samples were analyzed within the recommended method holding time
- All method blanks for this batch meet method specific criteria

SGS Accutest New England certifies that all analysis were performed within method specification. It is further recommended that this report to be used in its entirety. The Laboratory Director for SGS Accutest New England or assignee as verified by the signature on the cover page has authorized the release of this report(MC47325)

Summary of Hits

Job Number: MC47325
Account: EnviroTrac
Project: Maggiore Somerville, 343 - 351 Summer Street, Somerville, MA
Collected: 08/12/16

Lab Sample ID / Analyte	Client Sample ID	Result/ Qual	RL	MDL	Units	Method
MC47325-1	**S-1**					
Acenaphthene		0.618	0.44		mg/kg	MADEP EPH REV 1.1
Anthracene		1.71	0.44		mg/kg	MADEP EPH REV 1.1
Benzo(a)anthracene		5.15	0.44		mg/kg	MADEP EPH REV 1.1
Benzo(a)pyrene		4.84	0.44		mg/kg	MADEP EPH REV 1.1
Benzo(b)fluoranthene		4.48	0.44		mg/kg	MADEP EPH REV 1.1
Benzo(g,h,i)perylene		2.86	0.44		mg/kg	MADEP EPH REV 1.1
Benzo(k)fluoranthene		3.88	0.44		mg/kg	MADEP EPH REV 1.1
Chrysene		5.00	0.44		mg/kg	MADEP EPH REV 1.1
Dibenz(a,h)anthracene		0.957	0.44		mg/kg	MADEP EPH REV 1.1
Fluoranthene		10.5	0.44		mg/kg	MADEP EPH REV 1.1
Fluorene		0.712	0.44		mg/kg	MADEP EPH REV 1.1
Indeno(1,2,3-cd)pyrene		2.86	0.44		mg/kg	MADEP EPH REV 1.1
Phenanthrene		6.73	0.44		mg/kg	MADEP EPH REV 1.1
Pyrene		7.92	0.44		mg/kg	MADEP EPH REV 1.1
C11-C22 Aromatics (Unadj.)		200	18		mg/kg	MADEP EPH REV 1.1
C19-C36 Aliphatics		76.6	18		mg/kg	MADEP EPH REV 1.1
C11-C22 Aromatics		142	18		mg/kg	MADEP EPH REV 1.1
MC47325-2	**S-2**					
No hits reported in this sample.						
MC47325-3	**S-3**					
Acenaphthene		1.73	0.47		mg/kg	MADEP EPH REV 1.1
Acenaphthylene		2.45	0.47		mg/kg	MADEP EPH REV 1.1
Anthracene		11.9	0.47		mg/kg	MADEP EPH REV 1.1
Benzo(a)anthracene		28.1	0.47		mg/kg	MADEP EPH REV 1.1
Benzo(a)pyrene		19.2	0.47		mg/kg	MADEP EPH REV 1.1
Benzo(b)fluoranthene		28.2	0.47		mg/kg	MADEP EPH REV 1.1
Benzo(g,h,i)perylene		9.59	0.47		mg/kg	MADEP EPH REV 1.1
Benzo(k)fluoranthene		10.8	0.47		mg/kg	MADEP EPH REV 1.1
Chrysene		23.6	0.47		mg/kg	MADEP EPH REV 1.1
Dibenz(a,h)anthracene		3.81	0.47		mg/kg	MADEP EPH REV 1.1
Fluoranthene		55.7	2.4		mg/kg	MADEP EPH REV 1.1
Fluorene		4.67	0.47		mg/kg	MADEP EPH REV 1.1
Indeno(1,2,3-cd)pyrene		11.4	0.47		mg/kg	MADEP EPH REV 1.1
Phenanthrene		44.5	2.4		mg/kg	MADEP EPH REV 1.1
Pyrene		39.2	2.4		mg/kg	MADEP EPH REV 1.1
C11-C22 Aromatics (Unadj.)		950	94		mg/kg	MADEP EPH REV 1.1
C9-C18 Aliphatics		11.7	9.4		mg/kg	MADEP EPH REV 1.1
C19-C36 Aliphatics		95.3	19		mg/kg	MADEP EPH REV 1.1
C11-C22 Aromatics		655	19		mg/kg	MADEP EPH REV 1.1

Summary of Hits

Job Number: MC47325
Account: EnviroTrac
Project: Maggiore Somerville, 343 - 351 Summer Street, Somerville, MA
Collected: 08/12/16

Lab Sample ID / Analyte	Client Sample ID	Result/ Qual	RL	MDL	Units	Method
MC47325-4	**S-4**					
No hits reported in this sample.						
MC47325-5	**S-5**					
Acenaphthene		0.682	0.45		mg/kg	MADEP EPH REV 1.1
Anthracene		1.94	0.45		mg/kg	MADEP EPH REV 1.1
Benzo(a)anthracene		6.18	0.45		mg/kg	MADEP EPH REV 1.1
Benzo(a)pyrene		5.53	0.45		mg/kg	MADEP EPH REV 1.1
Benzo(b)fluoranthene		5.89	0.45		mg/kg	MADEP EPH REV 1.1
Benzo(g,h,i)perylene		3.41	0.45		mg/kg	MADEP EPH REV 1.1
Benzo(k)fluoranthene		2.91	0.45		mg/kg	MADEP EPH REV 1.1
Chrysene		5.49	0.45		mg/kg	MADEP EPH REV 1.1
Dibenz(a,h)anthracene		1.15	0.45		mg/kg	MADEP EPH REV 1.1
Fluoranthene		12.5	0.45		mg/kg	MADEP EPH REV 1.1
Fluorene		0.794	0.45		mg/kg	MADEP EPH REV 1.1
Indeno(1,2,3-cd)pyrene		3.35	0.45		mg/kg	MADEP EPH REV 1.1
Phenanthrene		9.08	0.45		mg/kg	MADEP EPH REV 1.1
Pyrene		9.47	0.45		mg/kg	MADEP EPH REV 1.1
C11-C22 Aromatics (Unadj.)		230	18		mg/kg	MADEP EPH REV 1.1
C19-C36 Aliphatics		64.9	18		mg/kg	MADEP EPH REV 1.1
C11-C22 Aromatics		161	18		mg/kg	MADEP EPH REV 1.1
MC47325-6	**S-6**					
C11-C22 Aromatics (Unadj.)		296	18		mg/kg	MADEP EPH REV 1.1
C9-C18 Aliphatics		13.4	9.1		mg/kg	MADEP EPH REV 1.1
C19-C36 Aliphatics		488	18		mg/kg	MADEP EPH REV 1.1
C11-C22 Aromatics		294	18		mg/kg	MADEP EPH REV 1.1
MC47325-7	**S-7**					
C11-C22 Aromatics (Unadj.)		172	19		mg/kg	MADEP EPH REV 1.1
C9-C18 Aliphatics		10.3	9.3		mg/kg	MADEP EPH REV 1.1
C19-C36 Aliphatics		380	19		mg/kg	MADEP EPH REV 1.1
C11-C22 Aromatics		171	19		mg/kg	MADEP EPH REV 1.1
MC47325-8	**S-8**					
Benzo(a)anthracene		0.676	0.47		mg/kg	MADEP EPH REV 1.1
Benzo(a)pyrene		0.929	0.47		mg/kg	MADEP EPH REV 1.1
Benzo(b)fluoranthene		0.570	0.47		mg/kg	MADEP EPH REV 1.1
Benzo(g,h,i)perylene		0.791	0.47		mg/kg	MADEP EPH REV 1.1

Summary of Hits

Job Number: MC47325
Account: EnviroTrac
Project: Maggiore Somerville, 343 - 351 Summer Street, Somerville, MA
Collected: 08/12/16

Lab Sample ID / Analyte	Client Sample ID	Result/ Qual	RL	MDL	Units	Method
Benzo(k)fluoranthene		0.574	0.47		mg/kg	MADEP EPH REV 1.1
Chrysene		0.696	0.47		mg/kg	MADEP EPH REV 1.1
Fluoranthene		1.42	0.47		mg/kg	MADEP EPH REV 1.1
Phenanthrene		0.779	0.47		mg/kg	MADEP EPH REV 1.1
Pyrene		1.10	0.47		mg/kg	MADEP EPH REV 1.1
C11-C22 Aromatics (Unadj.)		136	19		mg/kg	MADEP EPH REV 1.1
C19-C36 Aliphatics		226	19		mg/kg	MADEP EPH REV 1.1
C11-C22 Aromatics		128	19		mg/kg	MADEP EPH REV 1.1
MC47325-9	**STOCKPILE**					
Benzene		0.523	0.17		mg/kg	SW846 8260C
n-Butylbenzene		8.83	1.7		mg/kg	SW846 8260C
sec-Butylbenzene		2.59	1.7		mg/kg	SW846 8260C
1,2-Dichlorobenzene		0.877	0.66		mg/kg	SW846 8260C
Ethylbenzene		13.1	0.66		mg/kg	SW846 8260C
Isopropylbenzene		3.52	1.7		mg/kg	SW846 8260C
p-Isopropyltoluene		2.24	1.7		mg/kg	SW846 8260C
Naphthalene		48.7	1.7		mg/kg	SW846 8260C
n-Propylbenzene		13.5	1.7		mg/kg	SW846 8260C
Styrene		1.85	1.7		mg/kg	SW846 8260C
Toluene		13.5	1.7		mg/kg	SW846 8260C
1,2,4-Trimethylbenzene		127	1.7		mg/kg	SW846 8260C
1,3,5-Trimethylbenzene		29.9	1.7		mg/kg	SW846 8260C
m,p-Xylene		60.6	0.66		mg/kg	SW846 8260C
o-Xylene		29.9	0.66		mg/kg	SW846 8260C
Xylene (total)		90.5	0.66		mg/kg	SW846 8260C
Anthracene [a]		5.36	3.2		mg/kg	SW846 8270D
Benzo(a)anthracene [a]		14.9	3.2		mg/kg	SW846 8270D
Benzo(a)pyrene [a]		13.8	8.0		mg/kg	SW846 8270D
Benzo(b)fluoranthene [a]		11.7	3.2		mg/kg	SW846 8270D
Benzo(g,h,i)perylene [a]		9.17	3.2		mg/kg	SW846 8270D
Benzo(k)fluoranthene [a]		10.9	3.2		mg/kg	SW846 8270D
Chrysene [a]		13.8	3.2		mg/kg	SW846 8270D
Dibenzo(a,h)anthracene [a]		3.51	3.2		mg/kg	SW846 8270D
Fluoranthene [a]		33.8	3.2		mg/kg	SW846 8270D
Indeno(1,2,3-cd)pyrene [a]		9.55	8.0		mg/kg	SW846 8270D
2-Methylnaphthalene [a]		59.4	3.2		mg/kg	SW846 8270D
Naphthalene [a]		46.3	3.2		mg/kg	SW846 8270D
Phenanthrene [a]		18.9	3.2		mg/kg	SW846 8270D
Pyrene [a]		28.0	3.2		mg/kg	SW846 8270D
Benzene		0.434	0.31		mg/kg	MADEP VPH REV 1.1
Ethylbenzene		13.6	0.31		mg/kg	MADEP VPH REV 1.1
Naphthalene		23.3	0.31		mg/kg	MADEP VPH REV 1.1
Toluene		11.0	0.31		mg/kg	MADEP VPH REV 1.1

Summary of Hits

Job Number: MC47325
Account: EnviroTrac
Project: Maggiore Somerville, 343 - 351 Summer Street, Somerville, MA
Collected: 08/12/16

Lab Sample ID / Analyte	Client Sample ID	Result/ Qual	RL	MDL	Units	Method
m,p-Xylene		39.4	0.31		mg/kg	MADEP VPH REV 1.1
o-Xylene		23.7	0.31		mg/kg	MADEP VPH REV 1.1
C5- C8 Aliphatics (Unadj.)		130	6.3		mg/kg	MADEP VPH REV 1.1
C9- C12 Aliphatics (Unadj.)		1040	6.3		mg/kg	MADEP VPH REV 1.1
C9- C10 Aromatics (Unadj.)		566	6.3		mg/kg	MADEP VPH REV 1.1
C5- C8 Aliphatics		118	6.3		mg/kg	MADEP VPH REV 1.1
C9- C12 Aliphatics		398	6.3		mg/kg	MADEP VPH REV 1.1
Acenaphthene		2.55	0.50		mg/kg	MADEP EPH REV 1.1
Anthracene		0.903	0.50		mg/kg	MADEP EPH REV 1.1
Benzo(a)anthracene		3.28	0.50		mg/kg	MADEP EPH REV 1.1
Chrysene		3.29	0.50		mg/kg	MADEP EPH REV 1.1
Fluoranthene		5.28	0.50		mg/kg	MADEP EPH REV 1.1
Fluorene		2.78	0.50		mg/kg	MADEP EPH REV 1.1
2-Methylnaphthalene		41.4	2.5		mg/kg	MADEP EPH REV 1.1
Naphthalene		24.1	0.50		mg/kg	MADEP EPH REV 1.1
Phenanthrene		4.55	0.50		mg/kg	MADEP EPH REV 1.1
Pyrene		4.59	0.50		mg/kg	MADEP EPH REV 1.1
C11-C22 Aromatics (Unadj.)		2440	99		mg/kg	MADEP EPH REV 1.1
C9-C18 Aliphatics		1390	9.9		mg/kg	MADEP EPH REV 1.1
C19-C36 Aliphatics		5850	20		mg/kg	MADEP EPH REV 1.1
C11-C22 Aromatics		2350	20		mg/kg	MADEP EPH REV 1.1
Aroclor 1260		0.101	0.035		mg/kg	SW846 8082A
Arsenic		12.0	0.88		mg/kg	SW846 6010C
Barium		100	4.4		mg/kg	SW846 6010C
Beryllium		0.55	0.35		mg/kg	SW846 6010C
Cadmium		0.74	0.35		mg/kg	SW846 6010C
Chromium		22.6	0.88		mg/kg	SW846 6010C
Lead		350	0.88		mg/kg	SW846 6010C
Nickel		16.1	3.5		mg/kg	SW846 6010C
Vanadium		32.8	0.88		mg/kg	SW846 6010C
Zinc		186	1.8		mg/kg	SW846 6010C
Ignitability (Flashpoint)		> 230			Deg. F	SW846 1020
Specific Conductivity		260	0.50		umhos/cm	EPA 120.1M
pH		7.8			su	SW846 9045D

(a) Elevated RL due to dilution required for matrix interference.

Sample Results

Report of Analysis

Report of Analysis

Client Sample ID:	S-1		
Lab Sample ID:	MC47325-1	**Date Sampled:**	08/12/16
Matrix:	SO - Soil	**Date Received:**	08/16/16
Method:	MADEP VPH REV 1.1	**Percent Solids:**	96.5
Project:	Maggiore Somerville, 343 - 351 Summer Street, Somerville, MA		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	AB94983.D	1	08/18/16	DF	n/a	n/a	GAB5243
Run #2							

	Initial Weight	Final Volume	Methanol Aliquot
Run #1	15.1 g	16.0 ml	100 ul
Run #2			

MA-VPH List

CAS No.	Compound	Result	RL	Units	Q
71-43-2	Benzene	ND	0.28	mg/kg	
100-41-4	Ethylbenzene	ND	0.28	mg/kg	
1634-04-4	Methyl Tert Butyl Ether	ND	0.057	mg/kg	
91-20-3	Naphthalene	ND	0.28	mg/kg	
108-88-3	Toluene	ND	0.28	mg/kg	
	m,p-Xylene	ND	0.28	mg/kg	
95-47-6	o-Xylene	ND	0.28	mg/kg	
	C5- C8 Aliphatics (Unadj.)	ND	5.7	mg/kg	
	C9- C12 Aliphatics (Unadj.)	ND	5.7	mg/kg	
	C9- C10 Aromatics (Unadj.)	ND	5.7	mg/kg	
	C5- C8 Aliphatics	ND	5.7	mg/kg	
	C9- C12 Aliphatics	ND	5.7	mg/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
	2,3,4-Trifluorotoluene	74%		70-130%
	2,3,4-Trifluorotoluene	76%		70-130%

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

4.1 4

SGS Accutest LabLink@15:24 25-Aug-2016

Report of Analysis

Client Sample ID:	S-1		
Lab Sample ID:	MC47325-1	**Date Sampled:**	08/12/16
Matrix:	SO - Soil	**Date Received:**	08/16/16
Method:	MADEP EPH REV 1.1 SW846 3546	**Percent Solids:**	96.5
Project:	Maggiore Somerville, 343 - 351 Summer Street, Somerville, MA		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	DE15309.D	1	08/24/16	TA	08/17/16	OP48449	GDE854
Run #2							

	Initial Weight	Final Volume
Run #1	11.7 g	2.0 ml
Run #2		

CAS No.	Compound	Result	RL	Units	Q
83-32-9	Acenaphthene	0.618	0.44	mg/kg	
208-96-8	Acenaphthylene	ND	0.44	mg/kg	
120-12-7	Anthracene	1.71	0.44	mg/kg	
56-55-3	Benzo(a)anthracene	5.15	0.44	mg/kg	
50-32-8	Benzo(a)pyrene	4.84	0.44	mg/kg	
205-99-2	Benzo(b)fluoranthene	4.48	0.44	mg/kg	
191-24-2	Benzo(g,h,i)perylene	2.86	0.44	mg/kg	
207-08-9	Benzo(k)fluoranthene	3.88	0.44	mg/kg	
218-01-9	Chrysene	5.00	0.44	mg/kg	
53-70-3	Dibenz(a,h)anthracene	0.957	0.44	mg/kg	
206-44-0	Fluoranthene	10.5	0.44	mg/kg	
86-73-7	Fluorene	0.712	0.44	mg/kg	
193-39-5	Indeno(1,2,3-cd)pyrene	2.86	0.44	mg/kg	
91-57-6	2-Methylnaphthalene	ND	0.44	mg/kg	
91-20-3	Naphthalene	ND	0.44	mg/kg	
85-01-8	Phenanthrene	6.73	0.44	mg/kg	
129-00-0	Pyrene	7.92	0.44	mg/kg	
	C11-C22 Aromatics (Unadj.)	200	18	mg/kg	
	C9-C18 Aliphatics	ND	8.8	mg/kg	
	C19-C36 Aliphatics	76.6	18	mg/kg	
	C11-C22 Aromatics	142	18	mg/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
84-15-1	o-Terphenyl	132%		40-140%
321-60-8	2-Fluorobiphenyl	73%		40-140%
580-13-2	2-Bromonaphthalene	78%		40-140%
3386-33-2	1-Chlorooctadecane	93%		40-140%

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

4.1 4

Report of Analysis

Client Sample ID:	S-2		
Lab Sample ID:	MC47325-2	**Date Sampled:**	08/12/16
Matrix:	SO - Soil	**Date Received:**	08/16/16
Method:	MADEP VPH REV 1.1	**Percent Solids:**	95.6
Project:	Maggiore Somerville, 343 - 351 Summer Street, Somerville, MA		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	AB94984.D	1	08/18/16	DF	n/a	n/a	GAB5243
Run #2							

	Initial Weight	Final Volume	Methanol Aliquot
Run #1	16.1 g	16.0 ml	100 ul
Run #2			

MA-VPH List

CAS No.	Compound	Result	RL	Units	Q
71-43-2	Benzene	ND	0.27	mg/kg	
100-41-4	Ethylbenzene	ND	0.27	mg/kg	
1634-04-4	Methyl Tert Butyl Ether	ND	0.054	mg/kg	
91-20-3	Naphthalene	ND	0.27	mg/kg	
108-88-3	Toluene	ND	0.27	mg/kg	
	m,p-Xylene	ND	0.27	mg/kg	
95-47-6	o-Xylene	ND	0.27	mg/kg	
	C5- C8 Aliphatics (Unadj.)	ND	5.4	mg/kg	
	C9- C12 Aliphatics (Unadj.)	ND	5.4	mg/kg	
	C9- C10 Aromatics (Unadj.)	ND	5.4	mg/kg	
	C5- C8 Aliphatics	ND	5.4	mg/kg	
	C9- C12 Aliphatics	ND	5.4	mg/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
	2,3,4-Trifluorotoluene	75%		70-130%
	2,3,4-Trifluorotoluene	77%		70-130%

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	S-2		
Lab Sample ID:	MC47325-2	**Date Sampled:**	08/12/16
Matrix:	SO - Soil	**Date Received:**	08/16/16
Method:	MADEP EPH REV 1.1 SW846 3546	**Percent Solids:**	95.6
Project:	Maggiore Somerville, 343 - 351 Summer Street, Somerville, MA		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	DE15277.D	1	08/23/16	TA	08/17/16	OP48449	GDE853
Run #2							

	Initial Weight	Final Volume
Run #1	11.0 g	2.0 ml
Run #2		

CAS No.	Compound	Result	RL	Units	Q
83-32-9	Acenaphthene	ND	0.47	mg/kg	
208-96-8	Acenaphthylene	ND	0.47	mg/kg	
120-12-7	Anthracene	ND	0.47	mg/kg	
56-55-3	Benzo(a)anthracene	ND	0.47	mg/kg	
50-32-8	Benzo(a)pyrene	ND	0.47	mg/kg	
205-99-2	Benzo(b)fluoranthene	ND	0.47	mg/kg	
191-24-2	Benzo(g,h,i)perylene	ND	0.47	mg/kg	
207-08-9	Benzo(k)fluoranthene	ND	0.47	mg/kg	
218-01-9	Chrysene	ND	0.47	mg/kg	
53-70-3	Dibenz(a,h)anthracene	ND	0.47	mg/kg	
206-44-0	Fluoranthene	ND	0.47	mg/kg	
86-73-7	Fluorene	ND	0.47	mg/kg	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	0.47	mg/kg	
91-57-6	2-Methylnaphthalene	ND	0.47	mg/kg	
91-20-3	Naphthalene	ND	0.47	mg/kg	
85-01-8	Phenanthrene	ND	0.47	mg/kg	
129-00-0	Pyrene	ND	0.47	mg/kg	
	C11-C22 Aromatics (Unadj.)	ND	19	mg/kg	
	C9-C18 Aliphatics	ND	9.5	mg/kg	
	C19-C36 Aliphatics	ND	19	mg/kg	
	C11-C22 Aromatics	ND	19	mg/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
84-15-1	o-Terphenyl	84%		40-140%
321-60-8	2-Fluorobiphenyl	82%		40-140%
580-13-2	2-Bromonaphthalene	78%		40-140%
3386-33-2	1-Chlorooctadecane	101%		40-140%

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID: S-3
Lab Sample ID: MC47325-3 **Date Sampled:** 08/12/16
Matrix: SO - Soil **Date Received:** 08/16/16
Method: MADEP VPH REV 1.1 **Percent Solids:** 94.0
Project: Maggiore Somerville, 343 - 351 Summer Street, Somerville, MA

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	AB94985.D	1	08/18/16	DF	n/a	n/a	GAB5243
Run #2							

	Initial Weight	Final Volume	Methanol Aliquot
Run #1	18.4 g	16.0 ml	100 ul
Run #2			

MA-VPH List

CAS No.	Compound	Result	RL	Units	Q
71-43-2	Benzene	ND	0.25	mg/kg	
100-41-4	Ethylbenzene	ND	0.25	mg/kg	
1634-04-4	Methyl Tert Butyl Ether	ND	0.050	mg/kg	
91-20-3	Naphthalene	ND	0.25	mg/kg	
108-88-3	Toluene	ND	0.25	mg/kg	
	m,p-Xylene	ND	0.25	mg/kg	
95-47-6	o-Xylene	ND	0.25	mg/kg	
	C5- C8 Aliphatics (Unadj.)	ND	5.0	mg/kg	
	C9- C12 Aliphatics (Unadj.)	ND	5.0	mg/kg	
	C9- C10 Aromatics (Unadj.)	ND	5.0	mg/kg	
	C5- C8 Aliphatics	ND	5.0	mg/kg	
	C9- C12 Aliphatics	ND	5.0	mg/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
	2,3,4-Trifluorotoluene	75%		70-130%
	2,3,4-Trifluorotoluene	76%		70-130%

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

4.3
4

SGS Accutest LabLink@15:24 25-Aug-2016

Report of Analysis

Client Sample ID: S-3
Lab Sample ID: MC47325-3 **Date Sampled:** 08/12/16
Matrix: SO - Soil **Date Received:** 08/16/16
Method: MADEP EPH REV 1.1 SW846 3546 **Percent Solids:** 94.0
Project: Maggiore Somerville, 343 - 351 Summer Street, Somerville, MA

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	DE15278.D	1	08/23/16	TA	08/17/16	OP48449	GDE853
Run #2	DE15301.D	5	08/24/16	TA	08/17/16	OP48449	GDE854

	Initial Weight	Final Volume
Run #1	11.3 g	2.0 ml
Run #2	11.3 g	2.0 ml

CAS No.	Compound	Result	RL	Units	Q
83-32-9	Acenaphthene	1.73	0.47	mg/kg	
208-96-8	Acenaphthylene	2.45	0.47	mg/kg	
120-12-7	Anthracene	11.9	0.47	mg/kg	
56-55-3	Benzo(a)anthracene	28.1	0.47	mg/kg	
50-32-8	Benzo(a)pyrene	19.2	0.47	mg/kg	
205-99-2	Benzo(b)fluoranthene	28.2	0.47	mg/kg	
191-24-2	Benzo(g,h,i)perylene	9.59	0.47	mg/kg	
207-08-9	Benzo(k)fluoranthene	10.8	0.47	mg/kg	
218-01-9	Chrysene	23.6	0.47	mg/kg	
53-70-3	Dibenz(a,h)anthracene	3.81	0.47	mg/kg	
206-44-0	Fluoranthene	55.7 [a]	2.4	mg/kg	
86-73-7	Fluorene	4.67	0.47	mg/kg	
193-39-5	Indeno(1,2,3-cd)pyrene	11.4	0.47	mg/kg	
91-57-6	2-Methylnaphthalene	ND	0.47	mg/kg	
91-20-3	Naphthalene	ND	0.47	mg/kg	
85-01-8	Phenanthrene	44.5 [a]	2.4	mg/kg	
129-00-0	Pyrene	39.2 [a]	2.4	mg/kg	
	C11-C22 Aromatics (Unadj.)	950 [a]	94	mg/kg	
	C9-C18 Aliphatics	11.7	9.4	mg/kg	
	C19-C36 Aliphatics	95.3	19	mg/kg	
	C11-C22 Aromatics	655	19	mg/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
84-15-1	o-Terphenyl	225% [b]	211% [b]	40-140%
321-60-8	2-Fluorobiphenyl	90%	79%	40-140%
580-13-2	2-Bromonaphthalene	77%	60%	40-140%
3386-33-2	1-Chlorooctadecane	87%	68%	40-140%

(a) Result is from Run# 2
(b) Outside control limits due to matrix interference. Confirmed by reanalysis.

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

4.3
4

Report of Analysis

Client Sample ID: S-4
Lab Sample ID: MC47325-4 **Date Sampled:** 08 12 16
Matrix: SO - Soil **Date Received:** 08/16/16
Method: MADEP VPH REV 1.1 **Percent Solids:** 97.9
Project: Maggiore Somerville, 343 - 351 Summer Street, Somerville, MA

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	AB94986.D	1	08 18 16	DF	n a	n a	GAB5243
Run #2							

	Initial Weight	Final Volume	Methanol Aliquot
Run #1	16.3 g	16.0 ml	100 ul
Run #2			

MA-VPH List

CAS No.	Compound	Result	RL	Units	Q
71-43-2	Benzene	ND	0.26	mg/kg	
100-41-4	Ethylbenzene	ND	0.26	mg/kg	
1634-04-4	Methyl Tert Butyl Ether	ND	0.051	mg/kg	
91-20-3	Naphthalene	ND	0.26	mg/kg	
108-88-3	Toluene	ND	0.26	mg/kg	
	m,p-Xylene	ND	0.26	mg/kg	
95-47-6	o-Xylene	ND	0.26	mg/kg	
	C5- C8 Aliphatics (Unadj.)	ND	5.1	mg/kg	
	C9- C12 Aliphatics (Unadj.)	ND	5.1	mg/kg	
	C9- C10 Aromatics (Unadj.)	ND	5.1	mg/kg	
	C5- C8 Aliphatics	ND	5.1	mg/kg	
	C9- C12 Aliphatics	ND	5.1	mg/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
	2,3,4-Trifluorotoluene	71%		70-130%
	2,3,4-Trifluorotoluene	73%		70-130%

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

SGS Accutest LabLink@15:24 25-Aug-2016

Report of Analysis

Client Sample ID: S-4
Lab Sample ID: MC47325-4 **Date Sampled:** 08/12/16
Matrix: SO - Soil **Date Received:** 08/16/16
Method: MADEP EPH REV 1.1 SW846 3546 **Percent Solids:** 97.9
Project: Maggiore Somerville, 343 - 351 Summer Street, Somerville, MA

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	DE15279.D	1	08/23/16	TA	08/17/16	OP48449	GDE853
Run #2							

	Initial Weight	Final Volume
Run #1	11.5 g	2.0 ml
Run #2		

CAS No.	Compound	Result	RL	Units	Q
83-32-9	Acenaphthene	ND	0.44	mg/kg	
208-96-8	Acenaphthylene	ND	0.44	mg/kg	
120-12-7	Anthracene	ND	0.44	mg/kg	
56-55-3	Benzo(a)anthracene	ND	0.44	mg/kg	
50-32-8	Benzo(a)pyrene	ND	0.44	mg/kg	
205-99-2	Benzo(b)fluoranthene	ND	0.44	mg/kg	
191-24-2	Benzo(g,h,i)perylene	ND	0.44	mg/kg	
207-08-9	Benzo(k)fluoranthene	ND	0.44	mg/kg	
218-01-9	Chrysene	ND	0.44	mg/kg	
53-70-3	Dibenz(a,h)anthracene	ND	0.44	mg/kg	
206-44-0	Fluoranthene	ND	0.44	mg/kg	
86-73-7	Fluorene	ND	0.44	mg/kg	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	0.44	mg/kg	
91-57-6	2-Methylnaphthalene	ND	0.44	mg/kg	
91-20-3	Naphthalene	ND	0.44	mg/kg	
85-01-8	Phenanthrene	ND	0.44	mg/kg	
129-00-0	Pyrene	ND	0.44	mg/kg	
	C11-C22 Aromatics (Unadj.)	ND	18	mg/kg	
	C9-C18 Aliphatics	ND	8.9	mg/kg	
	C19-C36 Aliphatics	ND	18	mg/kg	
	C11-C22 Aromatics	ND	18	mg/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
84-15-1	o-Terphenyl	84%		40-140%
321-60-8	2-Fluorobiphenyl	78%		40-140%
580-13-2	2-Bromonaphthalene	87%		40-140%
3386-33-2	1-Chlorooctadecane	95%		40-140%

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID: S-5
Lab Sample ID: MC47325-5 **Date Sampled:** 08/12/16
Matrix: SO - Soil **Date Received:** 08/16/16
Method: MADEP VPH REV 1.1 **Percent Solids:** 96.2
Project: Maggiore Somerville, 343 - 351 Summer Street, Somerville, MA

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	AB94987.D	1	08/18/16	DF	n/a	n/a	GAB5243
Run #2							

	Initial Weight	Final Volume	Methanol Aliquot
Run #1	15.1 g	16.0 ml	100 ul
Run #2			

MA-VPH List

CAS No.	Compound	Result	RL	Units	Q
71-43-2	Benzene	ND	0.29	mg/kg	
100-41-4	Ethylbenzene	ND	0.29	mg/kg	
1634-04-4	Methyl Tert Butyl Ether	ND	0.057	mg/kg	
91-20-3	Naphthalene	ND	0.29	mg/kg	
108-88-3	Toluene	ND	0.29	mg/kg	
	m,p-Xylene	ND	0.29	mg/kg	
95-47-6	o-Xylene	ND	0.29	mg/kg	
	C5- C8 Aliphatics (Unadj.)	ND	5.7	mg/kg	
	C9- C12 Aliphatics (Unadj.)	ND	5.7	mg/kg	
	C9- C10 Aromatics (Unadj.)	ND	5.7	mg/kg	
	C5- C8 Aliphatics	ND	5.7	mg/kg	
	C9- C12 Aliphatics	ND	5.7	mg/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
	2,3,4-Trifluorotoluene	77%		70-130%
	2,3,4-Trifluorotoluene	79%		70-130%

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

SGS Accutest LabLink@15:24 25-Aug-2016

Report of Analysis

Client Sample ID: S-5
Lab Sample ID: MC47325-5 **Date Sampled:** 08/12/16
Matrix: SO - Soil **Date Received:** 08/16/16
Method: MADEP EPH REV 1.1 SW846 3546 **Percent Solids:** 96.2
Project: Maggiore Somerville, 343 - 351 Summer Street, Somerville, MA

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	DE15280.D	1	08/23/16	TA	08/17/16	OP48449	GDE853
Run #2							

	Initial Weight	Final Volume
Run #1	11.5 g	2.0 ml
Run #2		

CAS No.	Compound	Result	RL	Units	Q
83-32-9	Acenaphthene	0.682	0.45	mg/kg	
208-96-8	Acenaphthylene	ND	0.45	mg/kg	
120-12-7	Anthracene	1.94	0.45	mg/kg	
56-55-3	Benzo(a)anthracene	6.18	0.45	mg/kg	
50-32-8	Benzo(a)pyrene	5.53	0.45	mg/kg	
205-99-2	Benzo(b)fluoranthene	5.89	0.45	mg/kg	
191-24-2	Benzo(g,h,i)perylene	3.41	0.45	mg/kg	
207-08-9	Benzo(k)fluoranthene	2.91	0.45	mg/kg	
218-01-9	Chrysene	5.49	0.45	mg/kg	
53-70-3	Dibenz(a,h)anthracene	1.15	0.45	mg/kg	
206-44-0	Fluoranthene	12.5	0.45	mg/kg	
86-73-7	Fluorene	0.794	0.45	mg/kg	
193-39-5	Indeno(1,2,3-cd)pyrene	3.35	0.45	mg/kg	
91-57-6	2-Methylnaphthalene	ND	0.45	mg/kg	
91-20-3	Naphthalene	ND	0.45	mg/kg	
85-01-8	Phenanthrene	9.08	0.45	mg/kg	
129-00-0	Pyrene	9.47	0.45	mg/kg	
	C11-C22 Aromatics (Unadj.)	230	18	mg/kg	
	C9-C18 Aliphatics	ND	9.1	mg/kg	
	C19-C36 Aliphatics	64.9	18	mg/kg	
	C11-C22 Aromatics	161	18	mg/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
84-15-1	o-Terphenyl	122%		40-140%
321-60-8	2-Fluorobiphenyl	81%		40-140%
580-13-2	2-Bromonaphthalene	90%		40-140%
3386-33-2	1-Chlorooctadecane	88%		40-140%

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID: S-6
Lab Sample ID: MC47325-6
Matrix: SO - Soil
Method: MADEP VPH REV 1.1
Project: Maggiore Somerville, 343 - 351 Summer Street, Somerville, MA

Date Sampled: 08/12/16
Date Received: 08/16/16
Percent Solids: 96.0

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	AB94988.D	1	08/18/16	DF	n/a	n/a	GAB5243
Run #2							

	Initial Weight	Final Volume	Methanol Aliquot
Run #1	14.9 g	16.0 ml	100 ul
Run #2			

MA-VPH List

CAS No.	Compound	Result	RL	Units	Q
71-43-2	Benzene	ND	0.29	mg/kg	
100-41-4	Ethylbenzene	ND	0.29	mg/kg	
1634-04-4	Methyl Tert Butyl Ether	ND	0.058	mg/kg	
91-20-3	Naphthalene	ND	0.29	mg/kg	
108-88-3	Toluene	ND	0.29	mg/kg	
	m,p-Xylene	ND	0.29	mg/kg	
95-47-6	o-Xylene	ND	0.29	mg/kg	
	C5- C8 Aliphatics (Unadj.)	ND	5.8	mg/kg	
	C9- C12 Aliphatics (Unadj.)	ND	5.8	mg/kg	
	C9- C10 Aromatics (Unadj.)	ND	5.8	mg/kg	
	C5- C8 Aliphatics	ND	5.8	mg/kg	
	C9- C12 Aliphatics	ND	5.8	mg/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
	2,3,4-Trifluorotoluene	74%		70-130%
	2,3,4-Trifluorotoluene	77%		70-130%

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

SGS Accutest LabLink@15:24 25-Aug-2016

Report of Analysis

Client Sample ID: S-6
Lab Sample ID: MC47325-6
Matrix: SO - Soil
Method: MADEP EPH REV 1.1 SW846 3546
Project: Maggiore Somerville, 343 - 351 Summer Street, Somerville, MA

Date Sampled: 08/12/16
Date Received: 08/16/16
Percent Solids: 96.0

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	DE15281.D	1	08/24/16	TA	08/17/16	OP48449	GDI:853
Run #2							

	Initial Weight	Final Volume
Run #1	11.4 g	2.0 ml
Run #2		

CAS No.	Compound	Result	RL	Units	Q
83-32-9	Acenaphthene	ND	0.46	mg/kg	
208-96-8	Acenaphthylene	ND	0.46	mg/kg	
120-12-7	Anthracene	ND	0.46	mg/kg	
56-55-3	Benzo(a)anthracene	ND	0.46	mg/kg	
50-32-8	Benzo(a)pyrene	ND	0.46	mg/kg	
205-99-2	Benzo(b)fluoranthene	ND	0.46	mg/kg	
191-24-2	Benzo(g,h,i)perylene	ND	0.46	mg/kg	
207-08-9	Benzo(k)fluoranthene	ND	0.46	mg/kg	
218-01-9	Chrysene	ND	0.46	mg/kg	
53-70-3	Dibenz(a,h)anthracene	ND	0.46	mg/kg	
206-44-0	Fluoranthene	ND	0.46	mg/kg	
86-73-7	Fluorene	ND	0.46	mg/kg	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	0.46	mg/kg	
91-57-6	2-Methylnaphthalene	ND	0.46	mg/kg	
91-20-3	Naphthalene	ND	0.46	mg/kg	
85-01-8	Phenanthrene	ND	0.46	mg/kg	
129-00-0	Pyrene	ND	0.46	mg/kg	
	C11-C22 Aromatics (Unadj.)	296	18	mg/kg	
	C9-C18 Aliphatics	13.4	9.1	mg/kg	
	C19-C36 Aliphatics	488	18	mg/kg	
	C11-C22 Aromatics	294	18	mg/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
84-15-1	o-Terphenyl	82%		40-140%
321-60-8	2-Fluorobiphenyl	94%		40-140%
580-13-2	2-Bromonaphthalene	110%		40-140%
3386-33-2	1-Chlorooctadecane	65%		40-140%

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	S-7		
Lab Sample ID:	MC47325-7	**Date Sampled:**	08/12/16
Matrix:	SO - Soil	**Date Received:**	08/16/16
Method:	MADEP VPH REV 1.1	**Percent Solids:**	94.4
Project:	Maggiore Somerville, 343 - 351 Summer Street, Somerville, MA		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	AB94989.D	1	08/18/16	DF	n/a	n/a	GAB5243
Run #2							

	Initial Weight	Final Volume	Methanol Aliquot
Run #1	9.63 g	16.0 ml	100 ul
Run #2			

MA-VPH List

CAS No.	Compound	Result	RL	Units	Q
71-43-2	Benzene	ND	0.46	mg/kg	
100-41-4	Ethylbenzene	ND	0.46	mg/kg	
1634-04-4	Methyl Tert Butyl Ether	ND	0.091	mg/kg	
91-20-3	Naphthalene	ND	0.46	mg/kg	
108-88-3	Toluene	ND	0.46	mg/kg	
	m,p-Xylene	ND	0.46	mg/kg	
95-47-6	o-Xylene	ND	0.46	mg/kg	
	C5- C8 Aliphatics (Unadj.)	ND	9.1	mg/kg	
	C9- C12 Aliphatics (Unadj.)	ND	9.1	mg/kg	
	C9- C10 Aromatics (Unadj.)	ND	9.1	mg/kg	
	C5- C8 Aliphatics	ND	9.1	mg/kg	
	C9- C12 Aliphatics	ND	9.1	mg/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
	2,3,4-Trifluorotoluene	73%		70-130%
	2,3,4-Trifluorotoluene	76%		70-130%

(a) Soil to methanol ratio less than 0.75 to 1.

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

SGS Accutest LabLink@15:24 25-Aug-2016

Report of Analysis

Client Sample ID:	S-7		
Lab Sample ID:	MC47325-7	**Date Sampled:**	08/12/16
Matrix:	SO - Soil	**Date Received:**	08/16/16
Method:	MADEP EPH REV 1.1 SW846 3546	**Percent Solids:**	94.4
Project:	Maggiore Somerville, 343 - 351 Summer Street, Somerville, MA		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	DE15282.D	1	08/24/16	TA	08/17/16	OP48449	GDE853
Run #2							

	Initial Weight	Final Volume
Run #1	11.4 g	2.0 ml
Run #2		

CAS No.	Compound	Result	RL	Units	Q
83-32-9	Acenaphthene	ND	0.46	mg/kg	
208-96-8	Acenaphthylene	ND	0.46	mg/kg	
120-12-7	Anthracene	ND	0.46	mg/kg	
56-55-3	Benzo(a)anthracene	ND	0.46	mg/kg	
50-32-8	Benzo(a)pyrene	ND	0.46	mg/kg	
205-99-2	Benzo(b)fluoranthene	ND	0.46	mg/kg	
191-24-2	Benzo(g,h,i)perylene	ND	0.46	mg/kg	
207-08-9	Benzo(k)fluoranthene	ND	0.46	mg/kg	
218-01-9	Chrysene	ND	0.46	mg/kg	
53-70-3	Dibenz(a,h)anthracene	ND	0.46	mg/kg	
206-44-0	Fluoranthene	ND	0.46	mg/kg	
86-73-7	Fluorene	ND	0.46	mg/kg	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	0.46	mg/kg	
91-57-6	2-Methylnaphthalene	ND	0.46	mg/kg	
91-20-3	Naphthalene	ND	0.46	mg/kg	
85-01-8	Phenanthrene	ND	0.46	mg/kg	
129-00-0	Pyrene	ND	0.46	mg/kg	
	C11-C22 Aromatics (Unadj.)	172	19	mg/kg	
	C9-C18 Aliphatics	10.3	9.3	mg/kg	
	C19-C36 Aliphatics	380	19	mg/kg	
	C11-C22 Aromatics	171	19	mg/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
84-15-1	o-Terphenyl	82%		40-140%
321-60-8	2-Fluorobiphenyl	84%		40-140%
580-13-2	2-Bromonaphthalene	95%		40-140%
3386-33-2	1-Chlorooctadecane	80%		40-140%

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID: S-8
Lab Sample ID: MC47325-8
Matrix: SO - Soil
Method: MADEP VPH REV 1.1
Project: Maggiore Somerville, 343 - 351 Summer Street, Somerville, MA

Date Sampled: 08/12/16
Date Received: 08/16/16
Percent Solids: 94.2

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	AB94990.D	1	08/18/16	DF	n/a	n/a	GAB5243
Run #2							

	Initial Weight	Final Volume	Methanol Aliquot
Run #1	17.5 g	16.0 ml	100 ul
Run #2			

MA-VPH List

CAS No.	Compound	Result	RL	Units	Q
71-43-2	Benzene	ND	0.26	mg/kg	
100-41-4	Ethylbenzene	ND	0.26	mg/kg	
1634-04-4	Methyl Tert Butyl Ether	ND	0.052	mg/kg	
91-20-3	Naphthalene	ND	0.26	mg/kg	
108-88-3	Toluene	ND	0.26	mg/kg	
	m,p-Xylene	ND	0.26	mg/kg	
95-47-6	o-Xylene	ND	0.26	mg/kg	
	C5- C8 Aliphatics (Unadj.)	ND	5.2	mg/kg	
	C9- C12 Aliphatics (Unadj.)	ND	5.2	mg/kg	
	C9- C10 Aromatics (Unadj.)	ND	5.2	mg/kg	
	C5- C8 Aliphatics	ND	5.2	mg/kg	
	C9- C12 Aliphatics	ND	5.2	mg/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
	2,3,4-Trifluorotoluene	74%		70-130%
	2,3,4-Trifluorotoluene	77%		70-130%

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

SGS Accutest LabLink@15:24 25-Aug-2016

Report of Analysis

Client Sample ID: S-8
Lab Sample ID: MC47325-8
Matrix: SO - Soil
Method: MADEP EPH REV 1.1 SW846 3546
Project: Maggiore Somerville, 343 - 351 Summer Street, Somerville, MA

Date Sampled: 08 12 16
Date Received: 08/16/16
Percent Solids: 94.2

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	DE15284.D	1	08/24/16	TA	08/17/16	OP48449	GDE853
Run #2							

	Initial Weight	Final Volume
Run #1	11.3 g	2.0 ml
Run #2		

CAS No.	Compound	Result	RL	Units	Q
83-32-9	Acenaphthene	ND	0.47	mg/kg	
208-96-8	Acenaphthylene	ND	0.47	mg/kg	
120-12-7	Anthracene	ND	0.47	mg/kg	
56-55-3	Benzo(a)anthracene	0.676	0.47	mg/kg	
50-32-8	Benzo(a)pyrene	0.929	0.47	mg/kg	
205-99-2	Benzo(b)fluoranthene	0.570	0.47	mg/kg	
191-24-2	Benzo(g,h,i)perylene	0.791	0.47	mg/kg	
207-08-9	Benzo(k)fluoranthene	0.574	0.47	mg/kg	
218-01-9	Chrysene	0.696	0.47	mg/kg	
53-70-3	Dibenz(a,h)anthracene	ND	0.47	mg/kg	
206-44-0	Fluoranthene	1.42	0.47	mg/kg	
86-73-7	Fluorene	ND	0.47	mg/kg	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	0.47	mg/kg	
91-57-6	2-Methylnaphthalene	ND	0.47	mg/kg	
91-20-3	Naphthalene	ND	0.47	mg/kg	
85-01-8	Phenanthrene	0.779	0.47	mg/kg	
129-00-0	Pyrene	1.10	0.47	mg/kg	
	C11-C22 Aromatics (Unadj.)	136	19	mg/kg	
	C9-C18 Aliphatics	ND	9.4	mg/kg	
	C19-C36 Aliphatics	226	19	mg/kg	
	C11-C22 Aromatics	128	19	mg/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
84-15-1	o-Terphenyl	90%		40-140%
321-60-8	2-Fluorobiphenyl	81%		40-140%
580-13-2	2-Bromonaphthalene	84%		40-140%
3386-33-2	1-Chlorooctadecane	83%		40-140%

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	STOCKPILE		
Lab Sample ID:	MC47325-9	**Date Sampled:**	08/12/16
Matrix:	SO - Soil	**Date Received:**	08/16/16
Method:	SW846 8260C	**Percent Solids:**	90.9
Project:	Maggiore Somerville, 343 - 351 Summer Street, Somerville, MA		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	L99676.D	1	08/18/16	TB	n/a	n/a	MSL4331
Run #2							

	Initial Weight	Final Volume	Methanol Aliquot
Run #1	13.5 g	15.0 ml	20.0 ul
Run #2			

VOA MCP List

CAS No.	Compound	Result	RL	Units	Q
67-64-1	Acetone	ND	3.3	mg/kg	
71-43-2	Benzene	0.523	0.17	mg/kg	
108-86-1	Bromobenzene	ND	1.7	mg/kg	
74-97-5	Bromochloromethane	ND	1.7	mg/kg	
75-27-4	Bromodichloromethane	ND	0.66	mg/kg	
75-25-2	Bromoform	ND	0.66	mg/kg	
74-83-9	Bromomethane	ND	0.66	mg/kg	
78-93-3	2-Butanone (MEK)	ND	3.3	mg/kg	
104-51-8	n-Butylbenzene	8.83	1.7	mg/kg	
135-98-8	sec-Butylbenzene	2.59	1.7	mg/kg	
98-06-6	tert-Butylbenzene	ND	1.7	mg/kg	
75-15-0	Carbon disulfide	ND	1.7	mg/kg	
56-23-5	Carbon tetrachloride	ND	0.66	mg/kg	
108-90-7	Chlorobenzene	ND	0.66	mg/kg	
75-00-3	Chloroethane	ND	1.7	mg/kg	
67-66-3	Chloroform	ND	0.66	mg/kg	
74-87-3	Chloromethane	ND	1.7	mg/kg	
95-49-8	o-Chlorotoluene	ND	1.7	mg/kg	
106-43-4	p-Chlorotoluene	ND	1.7	mg/kg	
108-20-3	Di-Isopropyl ether	ND	0.66	mg/kg	
96-12-8	1,2-Dibromo-3-chloropropane	ND	1.7	mg/kg	
124-48-1	Dibromochloromethane	ND	0.66	mg/kg	
106-93-4	1,2-Dibromoethane	ND	0.66	mg/kg	
95-50-1	1,2-Dichlorobenzene	0.877	0.66	mg/kg	
541-73-1	1,3-Dichlorobenzene	ND	0.66	mg/kg	
106-46-7	1,4-Dichlorobenzene	ND	0.66	mg/kg	
75-71-8	Dichlorodifluoromethane	ND	0.66	mg/kg	
75-34-3	1,1-Dichloroethane	ND	0.66	mg/kg	
107-06-2	1,2-Dichloroethane	ND	0.66	mg/kg	
75-35-4	1,1-Dichloroethene	ND	0.66	mg/kg	
156-59-2	cis-1,2-Dichloroethene	ND	0.66	mg/kg	
156-60-5	trans-1,2-Dichloroethene	ND	0.66	mg/kg	

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

SGS Accutest LabLink@15:24 25-Aug-2016

Report of Analysis

Client Sample ID:	STOCKPILE		
Lab Sample ID:	MC47325-9	**Date Sampled:**	08/12/16
Matrix:	SO - Soil	**Date Received:**	08/16/16
Method:	SW846 8260C	**Percent Solids:**	90.9
Project:	Maggiore Somerville, 343 - 351 Summer Street, Somerville, MA		

VOA MCP List

CAS No.	Compound	Result	RL	Units	Q
78-87-5	1,2-Dichloropropane	ND	0.66	mg/kg	
142-28-9	1,3-Dichloropropane	ND	1.7	mg/kg	
594-20-7	2,2-Dichloropropane	ND	1.7	mg/kg	
563-58-6	1,1-Dichloropropene	ND	1.7	mg/kg	
10061-01-5	cis-1,3-Dichloropropene	ND	0.66	mg/kg	
10061-02-6	trans-1,3-Dichloropropene	ND	0.66	mg/kg	
123-91-1	1,4-Dioxane	ND	41	mg/kg	
60-29-7	Ethyl Ether	ND	1.7	mg/kg	
100-41-4	Ethylbenzene	13.1	0.66	mg/kg	
87-68-3	Hexachlorobutadiene	ND	1.7	mg/kg	
591-78-6	2-Hexanone	ND	3.3	mg/kg	
98-82-8	Isopropylbenzene	3.52	1.7	mg/kg	
99-87-6	p-Isopropyltoluene	2.24	1.7	mg/kg	
1634-04-4	Methyl Tert Butyl Ether	ND	0.66	mg/kg	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	1.7	mg/kg	
74-95-3	Methylene bromide	ND	1.7	mg/kg	
75-09-2	Methylene chloride	ND	0.66	mg/kg	
91-20-3	Naphthalene	48.7	1.7	mg/kg	
103-65-1	n-Propylbenzene	13.5	1.7	mg/kg	
100-42-5	Styrene	1.85	1.7	mg/kg	
994-05-8	tert-Amyl Methyl Ether	ND	1.7	mg/kg	
637-92-3	tert-Butyl Ethyl Ether	ND	0.66	mg/kg	
630-20-6	1,1,1,2-Tetrachloroethane	ND	1.7	mg/kg	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.66	mg/kg	
127-18-4	Tetrachloroethene	ND	0.66	mg/kg	
109-99-9	Tetrahydrofuran	ND	3.3	mg/kg	
108-88-3	Toluene	13.5	1.7	mg/kg	
87-61-6	1,2,3-Trichlorobenzene	ND	1.7	mg/kg	
120-82-1	1,2,4-Trichlorobenzene	ND	1.7	mg/kg	
71-55-6	1,1,1-Trichloroethane	ND	0.66	mg/kg	
79-00-5	1,1,2-Trichloroethane	ND	0.66	mg/kg	
79-01-6	Trichloroethene	ND	0.66	mg/kg	
75-69-4	Trichlorofluoromethane	ND	0.66	mg/kg	
96-18-4	1,2,3-Trichloropropane	ND	1.7	mg/kg	
95-63-6	1,2,4-Trimethylbenzene	127	1.7	mg/kg	
108-67-8	1,3,5-Trimethylbenzene	29.9	1.7	mg/kg	
75-01-4	Vinyl chloride	ND	0.66	mg/kg	
	m,p-Xylene	60.6	0.66	mg/kg	
95-47-6	o-Xylene	29.9	0.66	mg/kg	
1330-20-7	Xylene (total)	90.5	0.66	mg/kg	

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	STOCKPILE		
Lab Sample ID:	MC47325-9	**Date Sampled:**	08/12/16
Matrix:	SO - Soil	**Date Received:**	08/16/16
Method:	SW846 8260C	**Percent Solids:**	90.9
Project:	Maggiore Somerville, 343 - 351 Summer Street, Somerville, MA		

4.9

4

VOA MCP List

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	113%		65-141%
2037-26-5	Toluene-D8	102%		65-129%
460-00-4	4-Bromofluorobenzene	96%		63-137%

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

SGS Accutest LabLink@15:24 25-Aug-2016

Report of Analysis

Client Sample ID:	STOCKPILE		
Lab Sample ID:	MC47325-9	**Date Sampled:**	08/12/16
Matrix:	SO - Soil	**Date Received:**	08/16/16
Method:	SW846 8270D SW846 3546	**Percent Solids:**	90.9
Project:	Maggiore Somerville, 343 - 351 Summer Street, Somerville, MA		

4.9

4

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	W29535.D	20	08/23/16	MR	08/18/16	OP48454	MSW1189
Run #2							

	Initial Weight	Final Volume
Run #1	20.7 g	1.5 ml
Run #2		

ABN MCP List

CAS No.	Compound	Result	RL	Units	Q
65-85-0	Benzoic acid	ND	16	mg/kg	
95-57-8	2-Chlorophenol	ND	8.0	mg/kg	
59-50-7	4-Chloro-3-methyl phenol	ND	16	mg/kg	
120-83-2	2,4-Dichlorophenol	ND	16	mg/kg	
105-67-9	2,4-Dimethylphenol	ND	16	mg/kg	
51-28-5	2,4-Dinitrophenol	ND	16	mg/kg	
95-48-7	2-Methylphenol	ND	16	mg/kg	
	3&4-Methylphenol	ND	16	mg/kg	
88-75-5	2-Nitrophenol	ND	16	mg/kg	
100-02-7	4-Nitrophenol	ND	16	mg/kg	
87-86-5	Pentachlorophenol	ND	16	mg/kg	
108-95-2	Phenol	ND	8.0	mg/kg	
95-95-4	2,4,5-Trichlorophenol	ND	16	mg/kg	
88-06-2	2,4,6-Trichlorophenol	ND	16	mg/kg	
83-32-9	Acenaphthene	ND	3.2	mg/kg	
208-96-8	Acenaphthylene	ND	3.2	mg/kg	
98-86-2	Acetophenone	ND	16	mg/kg	
62-53-3	Aniline	ND	16	mg/kg	
120-12-7	Anthracene	5.36	3.2	mg/kg	
56-55-3	Benzo(a)anthracene	14.9	3.2	mg/kg	
50-32-8	Benzo(a)pyrene	13.8	8.0	mg/kg	
205-99-2	Benzo(b)fluoranthene	11.7	3.2	mg/kg	
191-24-2	Benzo(g,h,i)perylene	9.17	3.2	mg/kg	
207-08-9	Benzo(k)fluoranthene	10.9	3.2	mg/kg	
101-55-3	4-Bromophenyl phenyl ether	ND	8.0	mg/kg	
85-68-7	Butyl benzyl phthalate	ND	8.0	mg/kg	
91-58-7	2-Chloronaphthalene	ND	8.0	mg/kg	
106-47-8	4-Chloroaniline	ND	16	mg/kg	
218-01-9	Chrysene	13.8	3.2	mg/kg	
111-91-1	bis(2-Chloroethoxy)methane	ND	8.0	mg/kg	
111-44-4	bis(2-Chloroethyl)ether	ND	8.0	mg/kg	
108-60-1	bis(2-Chloroisopropyl)ether	ND	8.0	mg/kg	

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	STOCKPILE		
Lab Sample ID:	MC47325-9	**Date Sampled:**	08/12/16
Matrix:	SO - Soil	**Date Received:**	08/16/16
Method:	SW846 8270D SW846 3546	**Percent Solids:**	90.9
Project:	Maggiore Somerville, 343 - 351 Summer Street, Somerville, MA		

ABN MCP List

CAS No.	Compound	Result	RL	Units	Q
95-50-1	1,2-Dichlorobenzene	ND	8.0	mg/kg	
122-66-7	1,2-Diphenylhydrazine	ND	8.0	mg/kg	
541-73-1	1,3-Dichlorobenzene	ND	8.0	mg/kg	
106-46-7	1,4-Dichlorobenzene	ND	8.0	mg/kg	
121-14-2	2,4-Dinitrotoluene	ND	16	mg/kg	
606-20-2	2,6-Dinitrotoluene	ND	16	mg/kg	
91-94-1	3,3'-Dichlorobenzidine	ND	16	mg/kg	
53-70-3	Dibenzo(a,h)anthracene	3.51	3.2	mg/kg	
132-64-9	Dibenzofuran	ND	3.2	mg/kg	
84-74-2	Di-n-butyl phthalate	ND	8.0	mg/kg	
117-84-0	Di-n-octyl phthalate	ND	8.0	mg/kg	
84-66-2	Diethyl phthalate	ND	8.0	mg/kg	
131-11-3	Dimethyl phthalate	ND	8.0	mg/kg	
117-81-7	bis(2-Ethylhexyl)phthalate	ND	8.0	mg/kg	
206-44-0	Fluoranthene	33.8	3.2	mg/kg	
86-73-7	Fluorene	ND	3.2	mg/kg	
118-74-1	Hexachlorobenzene	ND	8.0	mg/kg	
87-68-3	Hexachlorobutadiene	ND	8.0	mg/kg	
77-47-4	Hexachlorocyclopentadiene	ND	16	mg/kg	
67-72-1	Hexachloroethane	ND	8.0	mg/kg	
193-39-5	Indeno(1,2,3-cd)pyrene	9.55	8.0	mg/kg	
78-59-1	Isophorone	ND	8.0	mg/kg	
91-57-6	2-Methylnaphthalene	59.4	3.2	mg/kg	
91-20-3	Naphthalene	46.3	3.2	mg/kg	
98-95-3	Nitrobenzene	ND	8.0	mg/kg	
621-64-7	N-Nitroso-di-n-propylamine	ND	8.0	mg/kg	
86-30-6	N-Nitrosodiphenylamine	ND	8.0	mg/kg	
85-01-8	Phenanthrene	18.9	3.2	mg/kg	
129-00-0	Pyrene	28.0	3.2	mg/kg	
120-82-1	1,2,4-Trichlorobenzene	ND	8.0	mg/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
367-12-4	2-Fluorophenol	62%		25-109%
4165-62-2	Phenol-d5	79%		29-113%
118-79-6	2,4,6-Tribromophenol	163% [b]		20-141%
4165-60-0	Nitrobenzene-d5	0% [b]		27-115%
321-60-8	2-Fluorobiphenyl	82%		34-118%
1718-51-0	Terphenyl-d14	83%		42-139%

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

SGS Accutest LabLink@15:24 25-Aug-2016

Report of Analysis

Client Sample ID:	STOCKPILE		
Lab Sample ID:	MC47325-9	**Date Sampled:**	08/12/16
Matrix:	SO - Soil	**Date Received:**	08/16/16
Method:	SW846 8270D SW846 3546	**Percent Solids:**	90.9
Project:	Maggiore Somerville, 343 - 351 Summer Street, Somerville, MA		

ABN MCP List

CAS No.	Compound	Result	RL	Units	Q

(a) Elevated RL due to dilution required for matrix interference.
(b) Outside control limits due to matrix interference compounded by dilution.

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	STOCKPILE		
Lab Sample ID:	MC47325-9	**Date Sampled:**	08 12 16
Matrix:	SO - Soil	**Date Received:**	08/16/16
Method:	MADEP VPH REV 1.1	**Percent Solids:**	90.9
Project:	Maggiore Somerville, 343 - 351 Summer Street, Somerville, MA		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	AB94991.D	1	08/18/16	DF	n/a	n/a	GAB5243
Run #2							

	Initial Weight	Final Volume	Methanol Aliquot
Run #1	15.3 g	16.0 ml	100 ul
Run #2			

MA-VPH List

CAS No.	Compound	Result	RL	Units	Q
71-43-2	Benzene	0.434	0.31	mg/kg	
100-41-4	Ethylbenzene	13.6	0.31	mg/kg	
1634-04-4	Methyl Tert Butyl Ether	ND	0.063	mg/kg	
91-20-3	Naphthalene	23.3	0.31	mg/kg	
108-88-3	Toluene	11.0	0.31	mg/kg	
	m,p-Xylene	39.4	0.31	mg/kg	
95-47-6	o-Xylene	23.7	0.31	mg/kg	
	C5- C8 Aliphatics (Unadj.)	130	6.3	mg/kg	
	C9- C12 Aliphatics (Unadj.)	1040	6.3	mg/kg	
	C9- C10 Aromatics (Unadj.)	566	6.3	mg/kg	
	C5- C8 Aliphatics	118	6.3	mg/kg	
	C9- C12 Aliphatics	398	6.3	mg/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
	2,3,4-Trifluorotoluene	78%		70-130%
	2,3,4-Trifluorotoluene	83%		70-130%

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

SGS Accutest LabLink@15:24 25-Aug-2016

Report of Analysis

Client Sample ID:	STOCKPILE		
Lab Sample ID:	MC47325-9	**Date Sampled:**	08/12/16
Matrix:	SO - Soil	**Date Received:**	08/16/16
Method:	SW846 8082A SW846 3546	**Percent Solids:**	90.9
Project:	Maggiore Somerville, 343 - 351 Summer Street, Somerville, MA		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	BK60925.D	1	08/20/16	AP	08/17/16	OP48455	GBK1914
Run #2							

	Initial Weight	Final Volume
Run #1	15.9 g	10.0 ml
Run #2		

MA Polychlorinated Biphenyls MCP List

CAS No.	Compound	Result	RL	Units	Q
12674-11-2	Aroclor 1016	ND	0.035	mg/kg	
11104-28-2	Aroclor 1221	ND	0.035	mg/kg	
11141-16-5	Aroclor 1232	ND	0.035	mg/kg	
53469-21-9	Aroclor 1242	ND	0.035	mg/kg	
12672-29-6	Aroclor 1248	ND	0.035	mg/kg	
11097-69-1	Aroclor 1254	ND	0.035	mg/kg	
11096-82-5	Aroclor 1260	0.101	0.035	mg/kg	
37324-23-5	Aroclor 1262	ND	0.035	mg/kg	
11100-14-4	Aroclor 1268	ND	0.035	mg/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
877-09-8	Tetrachloro-m-xylene	67%		25-145%
877-09-8	Tetrachloro-m-xylene	53%		25-145%
2051-24-3	Decachlorobiphenyl	58%		25-179%
2051-24-3	Decachlorobiphenyl	46%		25-179%

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	STOCKPILE		
Lab Sample ID:	MC47325-9	**Date Sampled:**	08/12/16
Matrix:	SO - Soil	**Date Received:**	08/16/16
Method:	MADEP EPH REV 1.1 SW846 3546	**Percent Solids:**	90.9
Project:	Maggiore Somerville, 343 - 351 Summer Street, Somerville, MA		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	DE15285.D	1	08/24/16	TA	08/17/16	OP48449	GDE853
Run #2	DE15302.D	5	08/24/16	TA	08/17/16	OP48449	GDE854

	Initial Weight	Final Volume
Run #1	11.1 g	2.0 ml
Run #2	11.1 g	2.0 ml

CAS No.	Compound	Result	RL	Units	Q
83-32-9	Acenaphthene	2.55	0.50	mg/kg	
208-96-8	Acenaphthylene	ND	0.50	mg/kg	
120-12-7	Anthracene	0.903	0.50	mg/kg	
56-55-3	Benzo(a)anthracene	3.28	0.50	mg/kg	
50-32-8	Benzo(a)pyrene	ND	0.50	mg/kg	
205-99-2	Benzo(b)fluoranthene	ND	0.50	mg/kg	
191-24-2	Benzo(g,h,i)perylene	ND	0.50	mg/kg	
207-08-9	Benzo(k)fluoranthene	ND	0.50	mg/kg	
218-01-9	Chrysene	3.29	0.50	mg/kg	
53-70-3	Dibenz(a,h)anthracene	ND	0.50	mg/kg	
206-44-0	Fluoranthene	5.28	0.50	mg/kg	
86-73-7	Fluorene	2.78	0.50	mg/kg	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	0.50	mg/kg	
91-57-6	2-Methylnaphthalene	41.4 [a]	2.5	mg/kg	
91-20-3	Naphthalene	24.1	0.50	mg/kg	
85-01-8	Phenanthrene	4.55	0.50	mg/kg	
129-00-0	Pyrene	4.59	0.50	mg/kg	
	C11-C22 Aromatics (Unadj.)	2440 [a]	99	mg/kg	
	C9-C18 Aliphatics	1390	9.9	mg/kg	
	C19-C36 Aliphatics	5850	20	mg/kg	
	C11-C22 Aromatics	2350	20	mg/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
84-15-1	o-Terphenyl	132%	134%	40-140%
321-60-8	2-Fluorobiphenyl	90%	81%	40-140%
580-13-2	2-Bromonaphthalene	66%	53%	40-140%
3386-33-2	1-Chlorooctadecane	250% [b]	88%	40-140%

(a) Result is from Run# 2
(b) Outside control limits due to possible matrix interference.

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

SGS Accutest LabLink@15:24 25-Aug-2016

Report of Analysis

Client Sample ID:	STOCKPILE		
Lab Sample ID:	MC47325-9	**Date Sampled:**	08/12/16
Matrix:	SO - Soil	**Date Received:**	08/16/16
		Percent Solids:	90.9
Project:	Maggiore Somerville, 343 - 351 Summer Street, Somerville, MA		

Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Antimony	< 0.88	0.88	mg/kg	1	08/18/16	08/19/16	EAL	SW846 6010C [1]	SW846 3050B [4]
Arsenic	12.0	0.88	mg/kg	1	08/18/16	08/19/16	EAL	SW846 6010C [1]	SW846 3050B [4]
Barium	100	4.4	mg/kg	1	08/18/16	08/19/16	EAL	SW846 6010C [1]	SW846 3050B [4]
Beryllium	0.55	0.35	mg/kg	1	08/18/16	08/19/16	EAL	SW846 6010C [1]	SW846 3050B [4]
Cadmium	0.74	0.35	mg/kg	1	08/18/16	08/19/16	EAL	SW846 6010C [1]	SW846 3050B [4]
Chromium	22.6	0.88	mg/kg	1	08/18/16	08/19/16	EAL	SW846 6010C [1]	SW846 3050B [4]
Lead	350	0.88	mg/kg	1	08/18/16	08/19/16	EAL	SW846 6010C [1]	SW846 3050B [4]
Mercury	< 0.032	0.032	mg/kg	1	08/19/16	08/22/16	EAL	SW846 7471B [2]	SW846 7471B [5]
Nickel	16.1	3.5	mg/kg	1	08/18/16	08/19/16	EAL	SW846 6010C [1]	SW846 3050B [4]
Selenium	< 0.88	0.88	mg/kg	1	08/18/16	08/19/16	EAL	SW846 6010C [1]	SW846 3050B [4]
Silver [a]	< 0.88	0.88	mg/kg	2	08/18/16	08/22/16	EAL	SW846 6010C [3]	SW846 3050B [4]
Thallium	< 0.88	0.88	mg/kg	1	08/18/16	08/19/16	EAL	SW846 6010C [1]	SW846 3050B [4]
Vanadium	32.8	0.88	mg/kg	1	08/18/16	08/19/16	EAL	SW846 6010C [1]	SW846 3050B [4]
Zinc	186	1.8	mg/kg	1	08/18/16	08/19/16	EAL	SW846 6010C [1]	SW846 3050B [4]

(1) Instrument QC Batch: MA19397
(2) Instrument QC Batch: MA19398
(3) Instrument QC Batch: MA19399
(4) Prep QC Batch: MP26648
(5) Prep QC Batch: MP26651

(a) Elevated RL due to dilution required for matrix interference.

RL = Reporting Limit

Report of Analysis

Client Sample ID:	STOCKPILE		
Lab Sample ID:	MC47325-9	**Date Sampled:**	08 12 16
Matrix:	SO - Soil	**Date Received:**	08/16/16
		Percent Solids:	90.9
Project:	Maggiore Somerville, 343 - 351 Summer Street, Somerville, MA		

General Chemistry

Analyte	Result	RL	Units	DF	Analyzed	By	Method
Cyanide Reactivity	< 1.6	1.6	mg/kg	1	08/19/16 17:49	CT	SW846 CHAP7
Ignitability (Flashpoint)	> 230		Deg. F	1	08/17/16	BF	SW846 1020
Solids, Percent	90.9		%	1	08/17/16	CF	SM 2540G-97 MOD
Specific Conductivity	260	0.50	umhos/cm	1	08/22/16	CF	EPA 120.1M
Sulfide Reactivity	< 54	54	mg/kg	1	08/18/16	BF	SW846 CHAP7
pH	7.8		su	1	08/17/16 15:45	EL	SW846 9045D

RL = Reporting Limit

Section 5

Misc. Forms

Custody Documents and Other Forms

Includes the following where applicable:

- Chain of Custody
- MCP Form
- EPH Form
- VPH Form
- Sample Tracking Chronicle
- QC Evaluation: MA MCP Limits

SGS ACCUTEST

CHAIN OF CUSTODY

SGS Accutest of New England
50 D'Angelo Drive, Building One Marlborough, MA 01752
TEL. 508-481-6200 FAX 508-481-7753
www.accutest.com

PAGE 1 OF 1

SGS Accutest Job #: MC47325

Client / Reporting Information	Project Information
Company Name: EnviroTrac Ltd.	Project Name: Maggiore Somerville
Street Address: 2 Merchant St.	Street: 343 351 Summer St
City: Sharon State: MA Zip: 02067	City: Somerville, MA
Project Contact: Craig Blake E-mail: craigb@envirotrac.com	Project #: 03 990202.00
Phone #: (781) 793-0074	Client PO#
Samplers Name(s): T. Morrissey	Project Manager: Craig Blake

Billing Information (If different from Report to): Company Name, Street Address, City, State, Zip, Attention, PO#

Requested Analysis: EPH, VPH, * ~~Fingerprint analysis~~, VOCs by 8260, SVOCs by 8270, MCP 14 Metals, Specific Conductivity, pH and Reactivity, Flash point, PCB, GC/FID Fingerprint

Matrix Codes: DW - Drinking Water, GW - Ground Water, WW - Water, SW - Surface Water, SO - Soil, SL - Sludge, SED - Sediment, OI - Oil, LIQ - Other Liquid, AIR - Air, SOL - Other Solid, WP - Wipe, FB - Field Blank, EB - Equipment Blank, RB - Rinse Blank, TB - Trip Blank

Sample #	Field ID / Point of Collection	Date	Time	Sampled by	Matrix	# of bottles	Preserved bottles	EPH	VPH	Fingerprint	VOCs 8260	SVOCs 8270	MCP 14 Metals	Specific Conductivity	pH and Reactivity	Flash point	PCB	GC/FID Fingerprint	LAB USE ONLY
-1	S-1	8/12/16	10:20	FM	SO	5	1 2 2	X	X										
-2	S-2		11:15				1 2 2	X	X										
-3	S-3		12:00				1 2 2	X	X										
-4	S-4		11:00				1 2 2	X	X										1/B1
-5	S-5		12:30				1 2 2	X	X										
-6	S6		12:35				1 2 2	X	X										9B
-7	S-7		1:00				1 2 2	X	X										
-8	S-8		1:15				1 2 2	X	X										1066
-9	Stockpile		2:00			6	2 2 2	X	X		X	X	X	X	X	X	X		
-10	Tank Contents		2:10		OI	1	1		X	X								X	

Turnaround Time (Business days): ☑ Std. 10 Business Days; ☐ Std. 5 Business Days (By Contract only); ☐ 5 Day RUSH; ☐ 3 Day EMERGENCY; ☐ 2 Day EMERGENCY; ☐ 1 Day EMERGENCY
Emergency & Rush T/A data available VIA LabLink

INITIAL ASSESSMENT ✓
LABEL VERIFICATION ✓

Data Deliverable Information: ☐ Commercial "A" (Level 1); ☐ Commercial "B" (Level 2); ☐ FULLT1 (Level 3+4); ☐ CT RCP; ☑ MA MCP; ☐ NYASP Category A; ☐ NYASP Category B; ☐ State Forms; ☐ EDD Format; ☐ Other
Commercial "A" = Results Only
Commercial "B" = Results + QC Summary

Comments / Special Instructions: * ~~Fingerprint Analyses as directed by EnviroTrac~~

Sample Custody must be documented below each time samples change possession, including courier delivery

Relinquished by	Date Time	Received By	Relinquished By	Date Time	Received By
1 [signature]	8/12/16 7:40	1 ET Secure Fridge	2 [signature]	8-16-16 1445	2 Brunault
3 Brunault	8-16-16 1624	3 Brunault	4		4
5		5	Custody Seal #	☐ Intact ☐ Not intact; Preserved where applicable ☐	On Ice; Cooler Temp. 2.6

MC47325: Chain of Custody
Page 1 of 2

SGS Accutest Sample Receipt Summary

Job Number: MC47325 Client: ENVIROTRAC Project: MAGGIORE SOMMERVILLE
Date / Time Received: 8/16/2016 4:24:00 PM Delivery Method: SGS Courier Airbill #'s:
Cooler Temps (Initial/Adjusted): #1: (2.6/2.6)

Cooler Security (Y or N)
1. Custody Seals Present: N
2. Custody Seals Intact: N
3. COC Present: Y
4. Smpl Dates/Time OK: Y

Cooler Temperature (Y or N)
1. Temp criteria achieved: Y
2. Thermometer ID: IRGUN1;
3. Cooler media: Ice (Bag)
4. No. Coolers: 1

Quality Control Preservation (Y or N, N/A)
1. Trip Blank present / cooler: N
2. Trip Blank listed on COC: N
3. Samples preserved properly: Y
4. VOCs headspace free: N/A

Sample Integrity - Documentation (Y or N)
1. Sample labels present on bottles: Y
2. Container labeling complete: Y
3. Sample container label / COC agree: Y

Sample Integrity - Condition (Y or N)
1. Sample recvd within HT: Y
2. All containers accounted for: Y
3. Condition of sample: Intact

Sample Integrity - Instructions (Y or N, N/A)
1. Analysis requested is clear: Y
2. Bottles received for unspecified tests: N
3. Sufficient volume recvd for analysis: Y
4. Compositing instructions clear: N/A
5. Filtering instructions clear: N/A

Comments

MC47325: Chain of Custody
Page 2 of 2

Massachusetts Department of Environmental Protection Bureau of Waste Site Cleanup	WSC-CAM	Exhibit VII A
	July 1, 2010	Revision No 1
	Final	

Exhibit VII A-2 MassDEP Analytical Protocol Certification Form

MassDEP Analytical Protocol Certification Form

Laboratory Name:	Accutest Laboratories of New England	Project #	MC47325
Project Location:	Maggiore Somerville, 343 - 351 Summer Street, Somerville, MA	MADEP RTN	None

This form provides certifications for the following data set: list Laboratory Sample ID Numbers(s)
MC47325-1 MC47325-2 MC47325-3 MC47325-4 MC47325-5 MC47325-6 MC47325-7,MC47325-8 MC47325-9

Matrix: Groundwater/Surface Water ( ) Soil/Sediment (X) Drinking Water ( ) Air ( ) Other ( )

CAM Protocol (check all that apply below)

8260 VOC (X) CAM II A	7470/7471 Hg (X) CAM II B	MassDEP VPH (X) CAM IV A	8081 Pesticides ( ) CAM V B	7196 Hex Cr ( ) CAM VI B	Mass DEP APH ( ) CAM IX A
8270 SVOC (X) CAM II B	7010 Metals ( ) CAM III C	MassDEP EPH (X) CAM IV B	8151 Herbicides ( ) CAM V C	8330 Explosives ( ) CAM VIII A	TO-15 VOC ( ) CAM IX B
6010 Metals (X) CAM III A	6020 Metals ( ) CAM III D	8082 PCB (X) CAM V A	9014 Total Cyanide/PAC ( ) CAM VI A	6860 Perchlorate ( ) CAM VIII B	

Affirmative Responses to Questions A Through F are required for "Presumptive Certainty status

A	Were all samples received in a condition consistent with those described on the Chain-of Custody, properly preserved (including temperature) in the field or laboratory, and prepared/analyzed within method holding times?	☑ Yes	☐ No
B	Were the analytical method(s) and all associated QC requirements specified in the selected CAM protocol(s) followed?	☑ Yes	☐ No
C	Were all required corrective actions and analytical response actions specified in the selected CAM protocol(s) implemented for all identified performance standard non-conformances?	☑ Yes	☐ No
D	Does the laboratory report comply with all the reporting requirements specified in CAM VII A, "Quality Assurance and Quality Control Guidelines for the Acquisition and Reporting of Analytical Data"?	☑ Yes	☐ No
E	VPH, EPH, APH, and TO-15 only. a. VPH, EPH, and APH Methods only: Was each method conducted without significant modification(s)? (Refer to the individual method(s) for a list of significant modifications). b. APH and TO-15 Methods only: Was the complete analyte list reported for each method?	☑ Yes ☑ Yes	☐ No ☐ No
F	Were all applicable CAM protocol QC and performance standard non-conformances identified and evaluated in a laboratory narrative (including all "No" responses to Questions A through E)?	☑ Yes	☐ No

Responses to questions G, H, and I below is required for "Presumptive Certainty" status

G	Were the reporting limits at or below all CAM reporting limits specified in the selected CAM protocols	☑ Yes	☐ No *
	Data User Note: Data that achieve "Presumptive Certainty" status may not necessarily meet the data useability and representativeness requirements described in 310 CMR 40.1056(2)(k) and WSC-07-350.		
H	Were all QC performance standards specified in the CAM protocol(s) achieved?	☐ Yes	☑ No *
I	Were results reported for the complete analyte list specified in the selected CAM protocol(s)?	☑ Yes	☐ No *

All Negative responses must be addressed in an attached Environmental Laboratory case narrative.

I the undersigned, attest under the pains and penalties of perjury that, based upon my personal inquiry of those responsible for obtaining the information, the material contained in this analytical report is, to the best of my knowledge and belief, accurate and complete.

Signature: _____ Position: Laboratory Director

Printed Name: H. (Brad) Madadian Date: 25-Aug-16

MADEP EPH FORM

Matrix	Aqueous ☐	Soil ☑	Sediment ☐	Other ☐		
Containers	Satisfactory ☑	Broken ☐	Leaking ☐			
Aqueous Preservative	N/A ☑	pH <= 2 ☐	pH > 2 ☐			
Temperature	Received on Ice ☐	Received at 4 Deg. C ☐	Other ☑	Rec'd at 2.6 Deg. C		
Extraction Method	SW846 3546					

Method for Ranges:	MADEP EPH REV 1.1	Client ID: S-1		Lab ID:	MC47325-1
Method for Targets	MADEP EPH REV 1.1	Date Collected: 8/12/2016		Date Received	8/16/2016
EPH Surrogate Stds.	Aliphatic: 1-Chlorooctadecane Aromatic: o-Terphenyl	Date Extracted: 8/17/2016 3.00.00 PM	First Date Run: 8/24/2016		Last Date Run: N/A
EPH Fractionation Surrogate Standards.	2-Fluorobiphenyl 2-Bromonaphthalene	% Solids: 96.5	Low Dilution: 1		High Dilution: N/A

Unadjusted Ranges	CAS #	Units	Result	RDL	Q
C11-C22 Aromatics (Unadj.)		mg/kg	200 A	18	
Diesel PAH Analytes					
2-Methylnaphthalene	91-57-6	mg/kg	ND	0.44	
Phenanthrene	85-01-8	mg/kg	6.73	0.44	
Acenaphthene	83-32-9	mg/kg	0.618	0.44	
Naphthalene	91-20-3	mg/kg	ND	0.44	
Other Target PAH Analytes					
Acenaphthylene	208-96-8	mg/kg	ND	0.44	
Anthracene	120-12-7	mg/kg	1.71	0.44	
Benzo(a)anthracene	56-55-3	mg/kg	5.15	0.44	
Benzo(a)pyrene	50-32-8	mg/kg	4.84	0.44	
Benzo(b)fluoranthene	205-99-2	mg/kg	4.48	0.44	
Benzo(g,h,i)perylene	191-24-2	mg/kg	2.86	0.44	
Benzo(k)fluoranthene	207-08-9	mg/kg	3.88	0.44	
Chrysene	218-01-9	mg/kg	5	0.44	
Dibenz(a,h)anthracene	53-70-3	mg/kg	0.957	0.44	
Fluoranthene	206-44-0	mg/kg	10.5	0.44	
Fluorene	86-73-7	mg/kg	0.712	0.44	
Indeno(1,2,3-cd)pyrene	193-39-5	mg/kg	2.86	0.44	
Pyrene	129-00-0	mg/kg	7.92	0.44	
Adjusted Ranges					
C9-C18 Aliphatics		mg/kg	ND A	8.8	
C19-C36 Aliphatics		mg/kg	76.6 A	18	
C11-C22 Aromatics		mg/kg	142 C	18	

Surrogate Recoveries			Acceptance Range
1-Chlorooctadecane	%	93	40-140 %
o-Terphenyl	%	132	40-140 %
2-Fluorobiphenyl	%	73	40-140 %
2-Bromonaphthalene	%	78	40-140 %

Footnotes

A Hydrocarbon Range data exclude concentrations of any surrogate(s) and/or internal standards eluting in that range

C Hydrocarbon Range data exclude concentrations of any surrogate(s) and/or internal standards eluting in that range. C11-C22 Aromatic Hydrocarbons exclude the concentration of Target PAH Analytes

Z A 'J' qualifier indicates an estimated value

Were all QA/QC procedures REQUIRED by the EPH Method followed? ☑ Yes ☐ No- Details Attatched

Were all performance/acceptance standards for required QA/QC procedures achieved? ☑ Yes ☐ No- Details Attatched

Were any significant modifications made to the EPH method, as specified in Sect. 11.3? ☑ No ☐ Yes- Details Attatched

I attest under the pains and penalties of perjury that, based upon my inquiry of those individuals immediately responsible for obtainig the information, the material contained in this report is, to the best of my knowledge and belief, accurate and complete.

Signature: _____ Position: Laboratory Director

Printed Name: H. (Brad) Madadian Date: 8/25/2016

MADEP EPH FORM

Matrix	Aqueous ☐	Soil ☑	Sediment ☐	Other ☐			
Containers	Satisfactory ☑	Broken ☐	Leaking ☐				
Aqueous Preservative	N/A ☑	pH <= 2 ☐	pH > 2 ☐				
Temperature	Received on Ice ☐	Received at 4 Deg. C ☐	Other ☑	Rec'd at 2.6 Deg. C			
Extraction Method	SW846 3546						

Method for Ranges:	MADEP EPH REV 1.1	Client ID: S-2		Lab ID: MC47325-2	
Method for Targets:	MADEP EPH REV 1.1	Date Collected: 8/12/2016		Date Received: 8/16/2016	
EPH Surrogate Stds.	Aliphatic: 1-Chlorooctadecane	Date Extracted:	First Date Run:	Last Date Run:	
	Aromatic: o-Terphenyl	8/17/2016 3:00:00 PM	8/23/2016	N/A	
EPH Fractionation Surrogate Standards.	2-Fluorobiphenyl	% Solids:	Low Dilution:	High Dilution:	
	2-Bromonaphthalene	95.6	1	N/A	

Unadjusted Ranges	CAS #	Units	Result	RDL	Q
C11-C22 Aromatics (Unadj.)		mg/kg	ND [A]	19	
Diesel PAH Analytes					
2-Methylnaphthalene	91-57-6	mg/kg	ND	0.47	
Phenanthrene	85-01-8	mg/kg	ND	0.47	
Acenaphthene	83-32-9	mg/kg	ND	0.47	
Naphthalene	91-20-3	mg/kg	ND	0.47	
Other Target PAH Analytes					
Acenaphthylene	208-96-8	mg/kg	ND	0.47	
Anthracene	120-12-7	mg/kg	ND	0.47	
Benzo(a)anthracene	56-55-3	mg/kg	ND	0.47	
Benzo(a)pyrene	50-32-8	mg/kg	ND	0.47	
Benzo(b)fluoranthene	205-99-2	mg/kg	ND	0.47	
Benzo(g,h,i)perylene	191-24-2	mg/kg	ND	0.47	
Benzo(k)fluoranthene	207-08-9	mg/kg	ND	0.47	
Chrysene	218-01-9	mg/kg	ND	0.47	
Dibenz(a,h)anthracene	53-70-3	mg/kg	ND	0.47	
Fluoranthene	206-44-0	mg/kg	ND	0.47	
Fluorene	86-73-7	mg/kg	ND	0.47	
Indeno(1,2,3-cd)pyrene	193-39-5	mg/kg	ND	0.47	
Pyrene	129-00-0	mg/kg	ND	0.47	
Adjusted Ranges					
C9-C18 Aliphatics		mg/kg	ND [A]	9.5	
C19-C36 Aliphatics		mg/kg	ND [A]	19	
C11-C22 Aromatics		mg/kg	ND [C]	19	

Surrogate Recoveries			Acceptance Range
1-Chlorooctadecane	%	101	40-140 %
o-Terphenyl	%	84	40-140 %
2-Fluorobiphenyl	%	82	40-140 %
2-Bromonaphthalene	%	78	40-140 %

Footnotes

A Hydrocarbon Range data exclude concentrations of any surrogate(s) and/or internal standards eluting in that range

C Hydrocarbon Range data exclude concentrations of any surrogate(s) and/or internal standards eluting in that range. C11-C22 Aromatic Hydrocarbons exclude the concentration of Target PAH Analytes

J A 'J' qualifier indicates an estimated value

Were all QA/QC procedures REQUIRED by the EPH Method followed? ☑ Yes ☐ No- Details Attatched

Were all performance/acceptance standards for required QA/QC procedures achieved? ☑ Yes ☐ No- Details Attatched

Were any significant modifications made to the EPH method, as specified in Sect. 11.3? ☑ No ☐ Yes- Details Attatched

I attest under the pains and penalties of perjury that, based upon my inquiry of those individuals immediately responsible for obtainig the information, the material contained in this report is, to the best of my knowledge and belief, accurate and complete.

Signature _____ Postition Laboratory Director

Printed Name H. (Brad) Madadian Date 8/25/2016

MADEP EPH FORM

Matrix	Aqueous ☐	Soil ☑	Sediment ☐	Other ☐			
Containers	Satisfactory ☑	Broken ☐	Leaking ☐				
Aqueous Preservative	N/A ☑	pH <= 2 ☐	pH > 2 ☐				
Temperature	Received on Ice ☐	Received at 4 Deg. C ☐	Other ☑	Rec'd at 2.6 Deg. C			
Extraction Method	SW846 3546						

Method for Ranges:	MADEP EPH REV 1.1	Client ID: S-3		Lab ID: MC47325-3	
Method for Targets:	MADEP EPH REV 1.1	Date Collected: 8/12/2016		Date Received: 8/16/2016	
EPH Surrogate Stds.	Aliphatic: 1-Chlorooctadecane	Date Extracted:	First Date Run:	Last Date Run:	
	Aromatic: o-Terphenyl	8/17/2016 3:00:00 PM	8/23/2016	08/24/16	
EPH Fractionation Surrogate Standards.	2-Fluorobiphenyl	% Solids:	Low Dilution:	High Dilution:	
	2-Bromonaphthalene	94	1	5	

Unadjusted Ranges	CAS #	Units	Result	RDL	Q
C11-C22 Aromatics (Unadj.)		mg/kg	950 [A]	94	
Diesel PAH Analytes					
2-Methylnaphthalene	91-57-6	mg/kg	ND	0.47	
Phenanthrene	85-01-8	mg/kg	44.5	2.4	
Acenaphthene	83-32-9	mg/kg	1.73	0.47	
Naphthalene	91-20-3	mg/kg	ND	0.47	
Other Target PAH Analytes					
Acenaphthylene	208-96-8	mg/kg	2.45	0.47	
Anthracene	120-12-7	mg/kg	11.9	0.47	
Benzo(a)anthracene	56-55-3	mg/kg	28.1	0.47	
Benzo(a)pyrene	50-32-8	mg/kg	19.2	0.47	
Benzo(b)fluoranthene	205-99-2	mg/kg	28.2	0.47	
Benzo(g,h,i)perylene	191-24-2	mg/kg	9.59	0.47	
Benzo(k)fluoranthene	207-08-9	mg/kg	10.8	0.47	
Chrysene	218-01-9	mg/kg	23.6	0.47	
Dibenz(a,h)anthracene	53-70-3	mg/kg	3.81	0.47	
Fluoranthene	206-44-0	mg/kg	55.7	2.4	
Fluorene	86-73-7	mg/kg	4.67	0.47	
Indeno(1,2,3-cd)pyrene	193-39-5	mg/kg	11.4	0.47	
Pyrene	129-00-0	mg/kg	39.2	2.4	
Adjusted Ranges					
C9-C18 Aliphatics		mg/kg	11.7 [A]	9.4	
C19-C36 Aliphatics		mg/kg	95.3 [A]	19	
C11-C22 Aromatics		mg/kg	655 [C]	19	

Surrogate Recoveries			Acceptance Range
1-Chlorooctadecane	%	68	40-140 %
1-Chlorooctadecane	%	87	40-140 %
o-Terphenyl	%	211 [E]	40-140 %
o-Terphenyl	%	225 [E]	40-140 %
2-Fluorobiphenyl	%	79	40-140 %
2-Fluorobiphenyl	%	90	40-140 %
2-Bromonaphthalene	%	60	40-140 %
2-Bromonaphthalene	%	77	40-140 %

Footnotes

A Hydrocarbon Range data exclude concentrations of any surrogate(s) and/or internal standards eluting in that range

C Hydrocarbon Range data exclude concentrations of any surrogate(s) and/or internal standards eluting in that range. C11-C22 Aromatic Hydrocarbons exclude the concentration of Target PAH Analytes

E Outside control limits due to matrix interference. Confirmed by reanalysis

J A 'J' qualifier indicates an estimated value

Were all QA/QC procedures REQUIRED by the EPH Method followed? ☑ Yes ☐ No- Details Attatched

Were all performance/acceptance standards for required QA/QC procedures achieved? ☐ Yes ☑ No- Details Attatched

Were any significant modifications made to the EPH method, as specified in Sect. 11.3? ☑ No ☐ Yes- Details Attatched

I attest under the pains and penalties of perjury that, based upon my inquiry of those individuals immediately responsible for obtainig the information, the material contained in this report is, to the best of my knowledge and belief, accurate and complete.

Signature _____ Postition Laboratory Director

Printed Name H. (Brad) Madadian Date 8/25/2016

MADEP EPH FORM

Matrix	Aqueous ☐	Soil ☑	Sediment ☐	Other ☐			
Containers	Satisfactory ☑	Broken ☐	Leaking ☐				
Aqueous Preservative	N/A ☑	pH <= 2 ☐	pH > 2 ☐				
Temperature	Received on Ice ☐	Received at 4 Deg. C ☐	Other ☑	Rec'd at 2.6 Deg. C			
Extraction Method	SW846 3546						

Method for Ranges:	MADEP EPH REV 1.1	Client ID: S-4		Lab ID: MC47325-4	
Method for Targets	MADEP EPH REV 1.1	Date Collected: 8/12/2016		Date Received: 8/16/2016	
EPH Surrogate Stds	Aliphatic: 1-Chlorooctadecane	Date Extracted:	First Date Run:	Last Date Run:	
	Aromatic: o-Terphenyl	8/17/2016 3:00:00 PM	8/23/2016	N/A	
EPH Fractionation Surrogate Standards:	2-Fluorobiphenyl	% Solids:	Low Dilution:	High Dilution:	
	2-Bromonaphthalene	97.9	1	N/A	

Unadjusted Ranges	CAS #	Units	Result	RDL	Q
C11-C22 Aromatics (Unadj.)		mg/kg	ND [A]	18	
Diesel PAH Analytes					
2-Methylnaphthalene	91-57-6	mg/kg	ND	0.44	
Phenanthrene	85-01-8	mg/kg	ND	0.44	
Acenaphthene	83-32-9	mg/kg	ND	0.44	
Naphthalene	91-20-3	mg/kg	ND	0.44	
Other Target PAH Analytes					
Acenaphthylene	208-96-8	mg/kg	ND	0.44	
Anthracene	120-12-7	mg/kg	ND	0.44	
Benzo(a)anthracene	56-55-3	mg/kg	ND	0.44	
Benzo(a)pyrene	50-32-8	mg/kg	ND	0.44	
Benzo(b)fluoranthene	205-99-2	mg/kg	ND	0.44	
Benzo(g,h,i)perylene	191-24-2	mg/kg	ND	0.44	
Benzo(k)fluoranthene	207-08-9	mg/kg	ND	0.44	
Chrysene	218-01-9	mg/kg	ND	0.44	
Dibenz(a,h)anthracene	53-70-3	mg/kg	ND	0.44	
Fluoranthene	206-44-0	mg/kg	ND	0.44	
Fluorene	86-73-7	mg/kg	ND	0.44	
Indeno(1,2,3-cd)pyrene	193-39-5	mg/kg	ND	0.44	
Pyrene	129-00-0	mg/kg	ND	0.44	
Adjusted Ranges					
C9-C18 Aliphatics		mg/kg	ND [A]	8.9	
C19-C36 Aliphatics		mg/kg	ND [A]	18	
C11-C22 Aromatics		mg/kg	ND [C]	18	

Surrogate Recoveries		Acceptance Range
1-Chlorooctadecane	%	95	40-140 %
o-Terphenyl	%	84	40-140 %
2-Fluorobiphenyl	%	78	40-140 %
2-Bromonaphthalene	%	87	40-140 %

Footnotes

A Hydrocarbon Range data exclude concentrations of any surrogate(s) and/or internal standards eluting in that range

C Hydrocarbon Range data exclude concentrations of any surrogate(s) and/or internal standards eluting in that range. C11-C22 Aromatic Hydrocarbons exclude the concentration of Target PAH Analytes

Z A 'J' qualifier indicates an estimated value

Were all QA/QC procedures REQUIRED by the EPH Method followed? ☑ Yes ☐ No- Details Attatched

Were all performance/acceptance standards for required QA/QC procedures achieved? ☑ Yes ☐ No- Details Attatched

Were any significant modifications made to the EPH method, as specified in Sect. 11.3? ☑ No ☐ Yes- Details Attatched

I attest under the pains and penalties of perjury that, based upon my inquiry of those individuals immediately responsible for obtainig the information, the material contained in this report is, to the best of my knowledge and belief, accurate and complete.

Signature [signature] Postition Laboratory Director

Printed Name H. (Brad) Madadian Date 8/25/2016

MADEP EPH FORM

Matrix	Aqueous ☐	Soil ☑	Sediment ☐	Other ☐			
Containers	Satisfactory ☑	Broken ☐	Leaking ☐				
Aqueous Preservative	N/A ☑	pH <= 2 ☐	pH > 2 ☐				
Temperature	Received on Ice ☐	Received at 4 Deg. C ☐	Other ☑	Rec'd at 2.6 Deg. C			
Extraction Method	SW846 3546						

Method for Ranges:	MADEP EPH REV 1.1	Client ID: S-5		Lab ID: MC47325-5	
Method for Targets	MADEP EPH REV 1.1	Date Collected: 8/12/2016		Date Received: 8/16/2016	
EPH Surrogate Stds	Aliphatic: 1-Chlorooctadecane	Date Extracted:	First Date Run:	Last Date Run:	
	Aromatic: o-Terphenyl	8/17/2016 3:00:00 PM	8/23/2016	N/A	
EPH Fractionation Surrogate Standards:	2-Fluorobiphenyl	% Solids:	Low Dilution:	High Dilution:	
	2-Bromonaphthalene	96.2	1	N/A	

Unadjusted Ranges	CAS #	Units	Result	RDL	Q
C11-C22 Aromatics (Unadj.)		mg/kg	230 [A]	18	
Diesel PAH Analytes					
2-Methylnaphthalene	91-57-6	mg/kg	ND	0.45	
Phenanthrene	85-01-8	mg/kg	9.08	0.45	
Acenaphthene	83-32-9	mg/kg	0.682	0.45	
Naphthalene	91-20-3	mg/kg	ND	0.45	
Other Target PAH Analytes					
Acenaphthylene	208-96-8	mg/kg	ND	0.45	
Anthracene	120-12-7	mg/kg	1.94	0.45	
Benzo(a)anthracene	56-55-3	mg/kg	6.18	0.45	
Benzo(a)pyrene	50-32-8	mg/kg	5.53	0.45	
Benzo(b)fluoranthene	205-99-2	mg/kg	5.89	0.45	
Benzo(g,h,i)perylene	191-24-2	mg/kg	3.41	0.45	
Benzo(k)fluoranthene	207-08-9	mg/kg	2.91	0.45	
Chrysene	218-01-9	mg/kg	5.49	0.45	
Dibenz(a,h)anthracene	53-70-3	mg/kg	1.15	0.45	
Fluoranthene	206-44-0	mg/kg	12.5	0.45	
Fluorene	86-73-7	mg/kg	0.794	0.45	
Indeno(1,2,3-cd)pyrene	193-39-5	mg/kg	3.35	0.45	
Pyrene	129-00-0	mg/kg	9.47	0.45	
Adjusted Ranges					
C9-C18 Aliphatics		mg/kg	ND [A]	9.1	
C19-C36 Aliphatics		mg/kg	64.9 [A]	18	
C11-C22 Aromatics		mg/kg	161 [C]	18	

Surrogate Recoveries		Acceptance Range
1-Chlorooctadecane	%	88	40-140 %
o-Terphenyl	%	122	40-140 %
2-Fluorobiphenyl	%	81	40-140 %
2-Bromonaphthalene	%	90	40-140 %

Footnotes

A Hydrocarbon Range data exclude concentrations of any surrogate(s) and/or internal standards eluting in that range

C Hydrocarbon Range data exclude concentrations of any surrogate(s) and/or internal standards eluting in that range. C11-C22 Aromatic Hydrocarbons exclude the concentration of Target PAH Analytes

Z A 'J' qualifier indicates an estimated value

Were all QA/QC procedures REQUIRED by the EPH Method followed? ☑ Yes ☐ No- Details Attatched

Were all performance/acceptance standards for required QA/QC procedures achieved? ☑ Yes ☐ No- Details Attatched

Were any significant modifications made to the EPH method, as specified in Sect. 11.3? ☑ No ☐ Yes- Details Attatched

I attest under the pains and penalties of perjury that, based upon my inquiry of those individuals immediately responsible for obtainig the information, the material contained in this report is, to the best of my knowledge and belief, accurate and complete.

Signature [signature] Postition Laboratory Director

Printed Name H. (Brad) Madadian Date 8/25/2016

MADEP EPH FORM

Matrix	Aqueous ☐	Soil ☑	Sediment ☐	Other ☐			
Containers	Satisfactory ☑	Broken ☐	Leaking ☐				
Aqueous Preservative	N/A ☑	pH <= 2 ☐	pH > 2 ☐				
Temperature	Received on Ice ☐	Received at 4 Deg. C ☐	Other ☑	Rec'd at 2.6 Deg. C			
Extraction Method	SW846 3546						

Method for Ranges:	MADEP EPH REV 1.1	Client ID: S-6		Lab ID: MC47325-6	
Method for Targets:	MADEP EPH REV 1.1	Date Collected: 8/12/2016		Date Received: 8/16/2016	
EPH Surrogate Stds	Aliphatic: 1-Chlorooctadecane	Date Extracted:	First Date Run		Last Date Run:
	Aromatic: o-Terphenyl	8/17/2016 3:00:00 PM	8/24/2016		N/A
EPH Fractionation Surrogate Standards.	2-Fluorobiphenyl	% Solids	Low Dilution.		High Dilution.
	2-Bromonaphthalene	96	1		N/A

Unadjusted Ranges	CAS #	Units	Result	RDL	Q
C11-C22 Aromatics (Unadj.)		mg/kg	296 A	18	
Diesel PAH Analytes					
2-Methylnaphthalene	91-57-6	mg/kg	ND	0.46	
Phenanthrene	85-01-8	mg/kg	ND	0.46	
Acenaphthene	83-32-9	mg/kg	ND	0.46	
Naphthalene	91-20-3	mg/kg	ND	0.46	
Other Target PAH Analytes					
Acenaphthylene	208-96-8	mg/kg	ND	0.46	
Anthracene	120-12-7	mg/kg	ND	0.46	
Benzo(a)anthracene	56-55-3	mg/kg	ND	0.46	
Benzo(a)pyrene	50-32-8	mg/kg	ND	0.46	
Benzo(b)fluoranthene	205-99-2	mg/kg	ND	0.46	
Benzo(g,h,i)perylene	191-24-2	mg/kg	ND	0.46	
Benzo(k)fluoranthene	207-08-9	mg/kg	ND	0.46	
Chrysene	218-01-9	mg/kg	ND	0.46	
Dibenz(a,h)anthracene	53-70-3	mg/kg	ND	0.46	
Fluoranthene	206-44-0	mg/kg	ND	0.46	
Fluorene	86-73-7	mg/kg	ND	0.46	
Indeno(1,2,3-cd)pyrene	193-39-5	mg/kg	ND	0.46	
Pyrene	129-00-0	mg/kg	ND	0.46	
Adjusted Ranges					
C9-C18 Aliphatics		mg/kg	13.4 A	9.1	
C19-C36 Aliphatics		mg/kg	488 A	18	
C11-C22 Aromatics		mg/kg	294 C	18	
Surrogate Recoveries				Acceptance Range	
1-Chlorooctadecane		%	65	40-140 %	
o-Terphenyl		%	82	40-140 %	
2-Fluorobiphenyl		%	94	40-140 %	
2-Bromonaphthalene		%	110	40-140 %	

Footnotes

A Hydrocarbon Range data exclude concentrations of any surrogate(s) and/or internal standards eluting in that range

C Hydrocarbon Range data exclude concentrations of any surrogate(s) and/or internal standards eluting in that range. C11-C22 Aromatic Hydrocarbons exclude the concentration of Target PAH Analytes

Z A 'J' qualifier indicates an estimated value

Were all QA/QC procedures REQUIRED by the EPH Method followed? ☑ Yes ☐ No- Details Attatched

Were all performance/acceptance standards for required QA/QC procedures achieved? ☑ Yes ☐ No- Details Attatched

Were any significant modifications made to the EPH method, as specified in Sect. 11.3? ☑ No ☐ Yes- Details Attatched

I attest under the pains and penalties of perjury that, based upon my inquiry of those individuals immediately responsible for obtainig the information, the material contained in this report is, to the best of my knowledge and belief, accurate and complete.

Signature _____ Postition Laboratory Director

Printed Name H. (Brad) Madadian Date 8/25/2016

5.3

5

MADEP EPH FORM

Matrix	Aqueous ☐	Soil ☑	Sediment ☐	Other ☐			
Containers	Satisfactory ☑	Broken ☐	Leaking ☐				
Aqueous Preservative	N/A ☑	pH <= 2 ☐	pH > 2 ☐				
Temperature	Received on Ice ☐	Received at 4 Deg. C ☐	Other ☑	Rec'd at 2.6 Deg. C			
Extraction Method	SW846 3546						

Method for Ranges:	MADEP EPH REV 1.1	Client ID: S-7		Lab ID: MC47325-7	
Method for Targets:	MADEP EPH REV 1.1	Date Collected: 8/12/2016		Date Received: 8/16/2016	
EPH Surrogate Stds.	Aliphatic: 1-Chlorooctadecane	Date Extracted:	First Date Run.		Last Date Run:
	Aromatic: o-Terphenyl	8/17/2016 3:00:00 PM	8/24/2016		N/A
EPH Fractionation Surrogate Standards.	2-Fluorobiphenyl	% Solids:	Low Dilution:		High Dilution
	2-Bromonaphthalene	94.4	1		N/A

Unadjusted Ranges	CAS #	Units	Result	RDL	Q
C11-C22 Aromatics (Unadj.)		mg/kg	172 A	19	
Diesel PAH Analytes					
2-Methylnaphthalene	91-57-6	mg/kg	ND	0.46	
Phenanthrene	85-01-8	mg/kg	ND	0.46	
Acenaphthene	83-32-9	mg/kg	ND	0.46	
Naphthalene	91-20-3	mg/kg	ND	0.46	
Other Target PAH Analytes					
Acenaphthylene	208-96-8	mg/kg	ND	0.46	
Anthracene	120-12-7	mg/kg	ND	0.46	
Benzo(a)anthracene	56-55-3	mg/kg	ND	0.46	
Benzo(a)pyrene	50-32-8	mg/kg	ND	0.46	
Benzo(b)fluoranthene	205-99-2	mg/kg	ND	0.46	
Benzo(g,h,i)perylene	191-24-2	mg/kg	ND	0.46	
Benzo(k)fluoranthene	207-08-9	mg/kg	ND	0.46	
Chrysene	218-01-9	mg/kg	ND	0.46	
Dibenz(a,h)anthracene	53-70-3	mg/kg	ND	0.46	
Fluoranthene	206-44-0	mg/kg	ND	0.46	
Fluorene	86-73-7	mg/kg	ND	0.46	
Indeno(1,2,3-cd)pyrene	193-39-5	mg/kg	ND	0.46	
Pyrene	129-00-0	mg/kg	ND	0.46	
Adjusted Ranges					
C9-C18 Aliphatics		mg/kg	10.3 A	9.3	
C19-C36 Aliphatics		mg/kg	380 A	19	
C11-C22 Aromatics		mg/kg	171 C	19	
Surrogate Recoveries				Acceptance Range	
1-Chlorooctadecane		%	80	40-140 %	
o-Terphenyl		%	82	40-140 %	
2-Fluorobiphenyl		%	84	40-140 %	
2-Bromonaphthalene		%	95	40-140 %	

Footnotes

A Hydrocarbon Range data exclude concentrations of any surrogate(s) and/or internal standards eluting in that range

C Hydrocarbon Range data exclude concentrations of any surrogate(s) and/or internal standards eluting in that range. C11-C22 Aromatic Hydrocarbons exclude the concentration of Target PAH Analytes

Z A 'J' qualifier indicates an estimated value

Were all QA/QC procedures REQUIRED by the EPH Method followed? ☑ Yes ☐ No- Details Attatched

Were all performance/acceptance standards for required QA/QC procedures achieved? ☑ Yes ☐ No- Details Attatched

Were any significant modifications made to the EPH method, as specified in Sect. 11.3? ☑ No ☐ Yes- Details Attatched

I attest under the pains and penalties of perjury that, based upon my inquiry of those individuals immediately responsible for obtainig the information, the material contained in this report is, to the best of my knowledge and belief, accurate and complete.

Signature _____ Postition Laboratory Director

Printed Name H. (Brad) Madadian Date 8/25/2016

5.3

5

MADEP EPH FORM

Matrix	Aqueous ☐	Soil ☑	Sediment ☐	Other ☐			
Containers	Satisfactory ☑	Broken ☐	Leaking ☐				
Aqueous Preservative	N/A ☑	pH <= 2 ☐	pH > 2 ☐				
Temperature	Received on Ice ☐	Received at 4 Deg. C ☐	Other ☑	Rec'd at 2.6 Deg. C			
Extraction Method	SW846 3546						

Method for Ranges	MADEP EPH REV 1.1	Client ID	S-8	Lab ID	MC47325-8
Method for Targets	MADEP EPH REV 1.1	Date Collected	8/12/2016	Date Received	8/16/2016
EPH Surrogate Stds.	Aliphatic: 1-Chlorooctadecane Aromatic: o-Terphenyl	Date Extracted.	First Date Run.		Last Date Run:
		8/17/2016 3:00:00 PM	8/24/2016		N/A
EPH Fractionation Surrogate Standards.	2-Fluorobiphenyl 2-Bromonaphthalene	% Solids:	Low Dilution:		High Dilution:
		94.2	1		N/A

Unadjusted Ranges	CAS #	Units	Result	RDL	Q
[illegible]		mg/kg	136 A	19	
Diesel PAH Analytes					
2-Methylnaphthalene	91-57-6	mg/kg	ND	0.47	
Phenanthrene	85-01-8	mg/kg	0.779	0.47	
Acenaphthene	83-32-9	mg/kg	ND	0.47	
Naphthalene	91-20-3	mg/kg	ND	0.47	
Other Target PAH Analytes					
Acenaphthylene	208-96-8	mg/kg	ND	0.47	
Anthracene	120-12-7	mg/kg	ND	0.47	
Benzo(a)anthracene	56-55-3	mg/kg	0.676	0.47	
Benzo(a)pyrene	50-32-8	mg/kg	0.929	0.47	
Benzo(b)fluoranthene	205-99-2	mg/kg	0.57	0.47	
Benzo(g,h,i)perylene	191-24-2	mg/kg	0.791	0.47	
Benzo(k)fluoranthene	207-08-9	mg/kg	0.574	0.47	
Chrysene	218-01-9	mg/kg	0.696	0.47	
Dibenz(a,h)anthracene	53-70-3	mg/kg	ND	0.47	
Fluoranthene	206-44-0	mg/kg	1.42	0.47	
Fluorene	86-73-7	mg/kg	ND	0.47	
Indeno(1,2,3-cd)pyrene	193-39-5	mg/kg	ND	0.47	
Pyrene	129-00-0	mg/kg	1.1	0.47	
Adjusted Ranges					
C9-C18 Aliphatics		mg/kg	ND A	9.4	
C19-C36 Aliphatics		mg/kg	226 A	19	
C11-C22 Aromatics		mg/kg	128 C	19	
Surrogate Recoveries				Acceptance Range	
1-Chlorooctadecane		%	83	40-140 %	
o-Terphenyl		%	90	40-140 %	
2-Fluorobiphenyl		%	81	40-140 %	
2-Bromonaphthalene		%	84	40-140 %	

Footnotes

A Hydrocarbon Range data exclude concentrations of any surrogate(s) and/or internal standards eluting in that range

C Hydrocarbon Range data exclude concentrations of any surrogate(s) and/or internal standards eluting in that range. C11-C22 Aromatic Hydrocarbons exclude the concentration of Target PAH Analytes

Z A 'J' qualifier indicates an estimated value

Were all QA/QC procedures REQUIRED by the EPH Method followed? ☑ Yes ☐ No- Details Attatched

Were all performance/acceptance standards for required QA/QC procedures achieved? ☑ Yes ☐ No- Details Attatched

Were any significant modifications made to the EPH method, as specified in Sect. 11.3? ☑ No ☐ Yes- Details Attatched

I attest under the pains and penalties of perjury that, based upon my inquiry of those individuals immediately responsible for obtainig the information, the material contained in this report is, to the best of my knowledge and belief, accurate and complete.

Signature [signature] Postition Laboratory Director

Printed Name H. (Brad) Madadian Date 8/25/2016

MADEP EPH FORM

Matrix	Aqueous ☐	Soil ☑	Sediment ☐	Other ☐			
Containers	Satisfactory ☑	Broken ☐	Leaking ☐				
Aqueous Preservative	N/A ☑	pH <= 2 ☐	pH > 2 ☐				
Temperature	Received on Ice ☐	Received at 4 Deg. C ☐	Other ☑	Rec'd at 2.6 Deg. C			
Extraction Method	SW846 3546						

Method for Ranges:	MADEP EPH REV 1.1	Client ID:	STOCKPILE	Lab ID:	MC47325-9
Method for Targets:	MADEP EPH REV 1.1	Date Collected:	8/12/2016	Date Received:	8/16/2016
EPH Surrogate Stds.	Aliphatic: 1-Chlorooctadecane Aromatic: o-Terphenyl	Date Extracted:	First Date Run:		Last Date Run:
		8/17/2016 3:00:00 PM	8/24/2016		08/24/16
EPH Fractionation Surrogate Standards.	2-Fluorobiphenyl 2-Bromonaphthalene	% Solids:	Low Dilution:		High Dilution:
		90.9	1		5

Unadjusted Ranges	CAS #	Units	Result	RDL	Q
C11-C22 Aromatics (Unadj.)		mg/kg	2440 A	99	
Diesel PAH Analytes					
2-Methylnaphthalene	91-57-6	mg/kg	41.4	2.5	
Phenanthrene	85-01-8	mg/kg	4.55	0.5	
Acenaphthene	83-32-9	mg/kg	2.55	0.5	
Naphthalene	91-20-3	mg/kg	24.1	0.5	
Other Target PAH Analytes					
Acenaphthylene	208-96-8	mg/kg	ND	0.5	
Anthracene	120-12-7	mg/kg	0.903	0.5	
Benzo(a)anthracene	56-55-3	mg/kg	3.28	0.5	
Benzo(a)pyrene	50-32-8	mg/kg	ND	0.5	
Benzo(b)fluoranthene	205-99-2	mg/kg	ND	0.5	
Benzo(g,h,i)perylene	191-24-2	mg/kg	ND	0.5	
Benzo(k)fluoranthene	207-08-9	mg/kg	ND	0.5	
Chrysene	218-01-9	mg/kg	3.29	0.5	
Dibenz(a,h)anthracene	53-70-3	mg/kg	ND	0.5	
Fluoranthene	206-44-0	mg/kg	5.28	0.5	
Fluorene	86-73-7	mg/kg	2.78	0.5	
Indeno(1,2,3-cd)pyrene	193-39-5	mg/kg	ND	0.5	
Pyrene	129-00-0	mg/kg	4.59	0.5	
Adjusted Ranges					
C9-C18 Aliphatics		mg/kg	1390 A	99	
C19-C36 Aliphatics		mg/kg	5850 A	20	
C11-C22 Aromatics		mg/kg	2350 C	20	
Surrogate Recoveries				Acceptance Range	
1-Chlorooctadecane		%	88	40-140 %	
1-Chlorooctadecane		%	250 F	40-140 %	
o-Terphenyl		%	134	40-140 %	
o-Terphenyl		%	132	40-140 %	
2-Fluorobiphenyl		%	81	40-140 %	
2-Fluorobiphenyl		%	90	40-140 %	
2-Bromonaphthalene		%	53	40-140 %	
2-Bromonaphthalene		%	66	40-140 %	

Footnotes

A Hydrocarbon Range data exclude concentrations of any surrogate(s) and/or internal standards eluting in that range

C Hydrocarbon Range data exclude concentrations of any surrogate(s) and/or internal standards eluting in that range. C11-C22 Aromatic Hydrocarbons exclude the concentration of Target PAH Analytes

F Outside control limits due to possible matrix interference.

Z A 'J' qualifier indicates an estimated value

Were all QA/QC procedures REQUIRED by the EPH Method followed? ☑ Yes ☐ No- Details Attatched

Were all performance/acceptance standards for required QA/QC procedures achieved? ☐ Yes ☑ No- Details Attatched

Were any significant modifications made to the EPH method, as specified in Sect. 11.3? ☑ No ☐ Yes- Details Attatched

I attest under the pains and penalties of perjury that, based upon my inquiry of those individuals immediately responsible for obtainig the information, the material contained in this report is, to the best of my knowledge and belief, accurate and complete.

Signature [signature] Postition Laboratory Director

Printed Name H. (Brad) Madadian Date 8/25/2016

MADEP VPH FORM

Matrix	Aqueous ☐	Soil ☑	Sediment ☐	Other ☐		
Containers	Satisfactory ☑	Broken ☐	Leaking ☐			
Aqueous Preservatives	N/A ☑	pH <= 2 ☐	pH > 2 ☐			
Temperature	Received on Ice ☐	Received at 4 Deg. C ☐	Other ☑	Rec'd at 2.6 Deg. C		
Methanol	Methanol Covering Soil. (mL Methanol/g soil: 1:1 +/- 25%)					

Method for Ranges: MADEP VPH REV 1.1
Method for Target Analytes: MADEP VPH REV 1.1
VPH Surrogate Standards
PID
FID

Client ID: S-1 | Lab ID: MC47325-1
Date Collected: 8/12/2016 | Date Received: 8/16/2016
Date Extracted: N/A | First Date Run: 8/18/2016 | Last Date Run: N/A
% Solids: 96.5 | Low Dilution: 1 | High Dilution: N/A

Unadjusted Ranges	CAS #	Elution Range	Units	Result	RDL	Q
C5- C8 Aliphatics (Unadj.)		N/A	mg/kg	ND A	5.7	
C9- C10 Aromatics (Unadj.)		N/A	mg/kg	ND A	5.7	
C9- C12 Aliphatics (Unadj.)		N/A	mg/kg	ND A	5.7	
Target Analytes						
Ethylbenzene	100-41-4	C9-C12	mg/kg	ND	0.28	
Toluene	108-88-3	C5-C8	mg/kg	ND	0.28	
Methyl Tert Butyl Ether	1634-04-4	C5-C8	mg/kg	ND	0.057	
Benzene	71-43-2	C5-C8	mg/kg	ND	0.28	
Naphthalene	91-20-3	N/A	mg/kg	ND	0.28	
o-Xylene	95-47-6	C9-C12	mg/kg	ND	0.28	
m,p-Xylene		C9-C12	mg/kg	ND	0.28	
Adjusted Ranges						
C5- C8 Aliphatics		N/A	mg/kg	ND B	5.7	
C9- C12 Aliphatics		N/A	mg/kg	ND D	5.7	

Surrogate Recoveries			Acceptance Range
FID 2,3,4-Trifluorotoluene	%	76	70-130 %
PID 2,3,4-Trifluorotoluene	%	74	70-130 %

Footnotes
A Hydrocarbon Range data exclude concentrations of any surrogate(s) and/or internal standards eluting in that range
B Hydrocarbon Range data exclude concentrations of any surrogate(s) and/or internal standards eluting in that range. C5-C8 Aliphatic Hydrocarbons exclude the concentration of Target Analytes eluting in that range
D Hydrocarbon Range data exclude concentrations of any surrogate(s) and/or internal standards eluting in that range. C9-C12 aliphatic Hydrocarbons exclude conc of Target Analytes eluting in that range AND concentration of C9-C10 Aromatic Hydrocarbons
Z A 'J' qualifier indicates an estimated value

Were all QA/QC procedures REQUIRED by the VPH Method followed? ☑ Yes ☐ No- Details Attatched
Were all performance/acceptance standards for required QA/QC procedures achieved? ☑ Yes ☐ No- Details Attatched
Were any significant modifications made to the VPH method, as specified in Sect. 11.3? ☑ No ☐ Yes- Details Attatched

I attest under the pains and penalties of perjury that, based upon my inquiry of those individuals immediately responsible for obtaining the information, the material contained in this report is, to the best of my knowledge and belief, accurate and complete

Signature: [signature] Position: Laboratory Director
Printed Name: H. (Brad) Madadian Date: 8/25/2016

MADEP VPH FORM

Matrix	Aqueous ☐	Soil ☑	Sediment ☐	Other ☐		
Containers	Satisfactory ☑	Broken ☐	Leaking ☐			
Aqueous Preservatives	N/A ☑	pH <= 2 ☐	pH > 2 ☐			
Temperature	Received on Ice ☐	Received at 4 Deg. C ☐	Other ☑	Rec'd at 2.6 Deg. C		
Methanol	Methanol Covering Soil. (mL Methanol/g soil: 1:1 +/- 25%)					

Method for Ranges: MADEP VPH REV 1.1
Method for Target Analytes: MADEP VPH REV 1.1
VPH Surrogate Standards
PID:
FID:

Client ID: S-2 | Lab ID: MC47325-2
Date Collected: 8/12/2016 | Date Received: 8/16/2016
Date Extracted: N/A | First Date Run: 8/18/2016 | Last Date Run: N/A
% Solids: 95.6 | Low Dilution: 1 | High Dilution: N/A

Unadjusted Ranges	CAS #	Elution Range	Units	Result	RDL	Q
C5- C8 Aliphatics (Unadj.)		N/A	mg/kg	ND A	5.4	
C9- C10 Aromatics (Unadj.)		N/A	mg/kg	ND A	5.4	
C9- C12 Aliphatics (Unadj.)		N/A	mg/kg	ND A	5.4	
Target Analytes						
Ethylbenzene	100-41-4	C9-C12	mg/kg	ND	0.27	
Toluene	108-88-3	C5-C8	mg/kg	ND	0.27	
Methyl Tert Butyl Ether	1634-04-4	C5-C8	mg/kg	ND	0.054	
Benzene	71-43-2	C5-C8	mg/kg	ND	0.27	
Naphthalene	91-20-3	N/A	mg/kg	ND	0.27	
o-Xylene	95-47-6	C9-C12	mg/kg	ND	0.27	
m,p-Xylene		C9-C12	mg/kg	ND	0.27	
Adjusted Ranges						
C5- C8 Aliphatics		N/A	mg/kg	ND B	5.4	
C9- C12 Aliphatics		N/A	mg/kg	ND D	5.4	

Surrogate Recoveries			Acceptance Range
FID 2,3,4-Trifluorotoluene	%	77	70-130 %
PID 2,3,4-Trifluorotoluene	%	75	70-130 %

Footnotes
A Hydrocarbon Range data exclude concentrations of any surrogate(s) and/or internal standards eluting in that range
B Hydrocarbon Range data exclude concentrations of any surrogate(s) and/or internal standards eluting in that range. C5-C8 Aliphatic Hydrocarbons exclude the concentration of Target Analytes eluting in that range.
D Hydrocarbon Range data exclude concentrations of any surrogate(s) and/or internal standards eluting in that range. C9-C12 aliphatic Hydrocarbons exclude conc of Target Analytes eluting in that range AND concentration of C9-C10 Aromatic Hydrocarbons.
Z A 'J' qualifier indicates an estimated value

Were all QA/QC procedures REQUIRED by the VPH Method followed? ☑ Yes ☐ No- Details Attatched
Were all performance/acceptance standards for required QA/QC procedures achieved? ☑ Yes ☐ No- Details Attatched
Were any significant modifications made to the VPH method, as specified in Sect. 11.3? ☑ No ☐ Yes- Details Attatched

I attest under the pains and penalties of perjury that, based upon my inquiry of those individuals immediately responsible for obtaining the information, the material contained in this report is, to the best of my knowledge and belief, accurate and complete

Signature: [signature] Position: Laboratory Director
Printed Name: H. (Brad) Madadian Date: 8/25/2016

MADEP VPH FORM

Matrix	Aqueous		Soil	✓	Sediment	Other
Containers	Satisfactory	✓	Broken		Leaking	
Aqueous Preservatives	N/A	✓	pH <= 2		pH > 2	
Temperature	Received on Ice		Received at 4 Deg. C		Other ☑	Rec'd at 2 6 Deg C
Methanol	Methanol Covering Soil, (mL Methanol/g soil; 1:1 +/- 25%)					

Method for Ranges	MADEP VPH REV 1 1	Client ID	S-3	Lab ID	MC47325-3
Method for Target Analytes	MADEP VPH REV 1 1	Date Collected	8/12/2016	Date Received	8/16/2016
VPH Surrogate Standards		Date Extracted	First Date Run		Last Date Run
PID		N/A	8/18/2016		N/A
FID		% Solids:	Low Dilution:		High Dilution:
		94	1		N/A

Unadjusted Ranges	CAS #	Elution Range	Units	Result	RDL	Q
C5- C8 Aliphatics (Unadj)		N/A	mg/kg	ND A	5	
C9- C10 Aromatics (Unadj)		N/A	mg/kg	ND A	5	
C9- C12 Aliphatics (Unadj)		N/A	mg/kg	ND A	5	
Target Analytes						
[illegible]	100-41-4	C9-C12	mg/kg	ND	0 25	
[illegible]	108-88-3	C5-C8	mg/kg	ND	0 25	
[illegible] Tert Butyl Ether	1634-04-4	C5-C8	mg/kg	ND	0 05	
Benzene	71-43-2	C5-C8	mg/kg	ND	0 25	
[illegible]	91-20-3	N/A	mg/kg	ND	0 25	
[illegible]	95-47-6	C9-C12	mg/kg	ND	0 25	
m,p-Xylene		C9-C12	mg/kg	ND	0 25	
Adjusted Ranges						
C5- C8 Aliphatics		N/A	mg/kg	ND B	5	
C9- C12 Aliphatics		N/A	mg/kg	ND D	5	

Surrogate Recoveries			Acceptance Range
FID 2,3 4-Trifluorotoluene	%	76	70-130 %
PID 2,3,4-Trifluorotoluene	%	75	70-130 %

Footnotes

A Hydrocarbon Range data exclude concentrations of any surrogate(s) and/or internal standards eluting in that range

B Hydrocarbon Range data exclude concentrations of any surrogate(s) and/or internal standards eluting in that range C5-C8 Aliphatic Hydrocarbons exclude the concentretion of Target Analytes eluting in that range

D Hydrocarbon Range data exclude concentrations of any surrogate(s) and/or internal standards eluting in that range C9-C12 aliphatic Hydrocarbons exclude conc of Target Analytes eluting in that range AND concentration of C9-C10 Aromatic Hydrocarbons

Z A 'J' qualifier indicates an estimated value

Were all QA/QC procedures REQUIRED by the VPH Method followed? ✓Yes No- Details Attatched
Were all performance/acceptance standards for required QA/QC procedures achieved? ☑Yes No- Details Attatched
Were any significant modifications made to the VPH method, as specified in Sect. 11.3? ✓No Yes- Details Attatched

I attest under the pains and penalties of perjury that, based upon my inquiry of those individuals immediately responsible for obtaining the information, the material contained in this report is, to the best of my knowledge and belief, accurate and complete

Signature [signature] Postition Laboratory Director

Printed Name H. (Brad) Madadian Date 8/25/2016

MADEP VPH FORM

Matrix	Aqueous	☐	Soil	☑	Sediment ☐	Other
Containers	Satisfactory	☑	Broken	☐	Leaking ☐	
Aqueous Preservatives	N/A	☑	pH <= 2	☐	pH > 2 ☐	
Temperature	Received on Ice	☐	Received at 4 Deg. C	☐	Other ☑	Rec'd at 2 6 Deg C
Methanol	Methanol Covering Soil, (mL Methanol/g soil; 1:1 +/- 25%)					

Method for Ranges:	MADEP VPH REV 1 1	Client ID:	S-4	Lab ID:	MC47325-4
Method for Target Analytes:	MADEP VPH REV 1 1	Date Collected:	8/12/2016	Date Received:	8/16/2016
VPH Surrogate Standards		Date Extracted:	First Date Run:		Last Date Run
PID.		N/A	8/18/2016		N/A
FID.		% Solids:	Low Dilution:		High Dilution:
		97.9	1		N/A

Unadjusted Ranges	CAS #	Elution Range	Units	Result	RDL	Q
C5- C8 Aliphatics (Unadj)		N/A	mg/kg	ND A	5 1	
C9- C10 Aromatics (Unadj)		N/A	mg/kg	ND A	5.1	
C9- C12 Aliphatics (Unadj)		N/A	mg/kg	ND A	5 1	
Target Analytes						
Ethylbenzene	100-41-4	C9-C12	mg/kg	ND	0 26	
Toluene	108-88-3	C5-C8	mg/kg	ND	0.26	
Methyl Tert Butyl Ether	1634-04-4	C5-C8	mg/kg	ND	0 051	
Benzene	71-43-2	C5-C8	mg/kg	ND	0 26	
Naphthalene	91-20-3	N/A	mg/kg	ND	0 26	
o-Xylene	95-47-6	C9-C12	mg/kg	ND	0 26	
m,p-Xylene		C9-C12	mg/kg	ND	0.26	
Adjusted Ranges						
C5- C8 Aliphatics		N/A	mg/kg	ND B	5.1	
C9- C12 Aliphatics		N/A	mg/kg	ND D	5.1	

Surrogate Recoveries			Acceptance Range
FID 2,3 4-Trifluorotoluene	%	73	70-130 %
PID 2,3 4-Trifluorotoluene	%	71	70-130 %

Footnotes

A Hydrocarbon Range data exclude concentrations of any surrogate(s) and/or internal standards eluting in that range

B Hydrocarbon Range data exclude concentrations of any surrogate(s) and/or internal standards eluting in that range. C5-C8 Aliphatic Hydrocarbons exclude the concentration of Target Analytes eluting in that range

D Hydrocarbon Range data exclude concentrations of any surrogate(s) and/or internal standards eluting in that range. C9-C12 aliphatic Hydrocarbons exclude conc of Target Analytes eluting in that range AND concentration of C9-C10 Aromatic Hydrocarbons

Z A 'J' qualifier indicates an estimated value

Were all QA/QC procedures REQUIRED by the VPH Method followed? ☑Yes ☐ No- Details Attatched
Were all performance/acceptance standards for required QA/QC procedures achieved? ☑Yes ☐ No- Details Attatched
Were any significant modifications made to the VPH method, as specified in Sect. 11.3? ☑No ☐ Yes- Details Attatched

I attest under the pains and penalties of perjury that, based upon my inquiry of those individuals immediately responsible for obtaining the information, the material contained in this report is, to the best of my knowledge and belief, accurate and complete

Signature [signature] Postition Laboratory Director

Printed Name H. (Brad) Madadian Date 8/25/2016

MADEP VPH FORM

Matrix	Aqueous ☐	Soil ☑	Sediment ☐	Other ☐	
Containers	Satisfactory ☑	Broken ☐	Leaking ☐		
Aqueous Preservatives	N/A ☑	pH <= 2 ☐	pH > 2 ☐		
Temperature	Received on Ice ☐	Received at 4 Deg. C ☐	Other ☑	Rec'd at 2 6 Deg C	
Methanol	Methanol Covering Soil, (mL Methanol/g soil; 1:1 +/- 25%)				

Method for Ranges:	MADEP VPH REV 1.1	Client ID: S-5		Lab ID: MC47325-5	
Method for Target Analytes:	MADEP VPH REV 1.1	Date Collected: 8/12/2016		Date Received: 8/16/2016	
VPH Surrogate Standards		Date Extracted:	First Date Run:	Last Date Run:	
PID		N/A	8/18/2016	N/A	
FID		% Solids:	Low Dilution:	High Dilution:	
		96 2	1	N/A	

Unadjusted Ranges	CAS #	Elution Range	Units	Result	RDL	Q
C5- C8 Aliphatics (Unadj)		N/A	mg/kg	ND A	5.7	
C9- C10 Aromatics (Unadj)		N/A	mg/kg	ND A	5.7	
C9- C12 Aliphatics (Unadj)		N/A	mg/kg	ND A	5.7	
Target Analytes						
Ethylbenzene	100-41-4	C9-C12	mg/kg	ND	0.29	
Toluene	108-88-3	C5-C8	mg/kg	ND	0 29	
Methyl Tert Butyl Ether	1634-04-4	C5-C8	mg/kg	ND	0 057	
Benzene	71-43-2	C5-C8	mg/kg	ND	0 29	
Naphthalene	91-20-3	N/A	mg/kg	ND	0 29	
o-Xylene	95-47-6	C9-C12	mg/kg	ND	0.29	
m,p-Xylene		C9-C12	mg/kg	ND	0 29	
Adjusted Ranges						
C5- C8 Aliphatics		N/A	mg/kg	ND B	5.7	
C9- C12 Aliphatics		N/A	mg/kg	ND D	5.7	

Surrogate Recoveries			Acceptance Range
FID 2,3,4-Trifluorotoluene	%	79	70-130 %
PID 2,3,4-Trifluorotoluene	%	77	70-130 %

Footnotes

A Hydrocarbon Range data exclude concentrations of any surrogate(s) and/or internal standards eluting in that range

B Hydrocarbon Range data exclude concentrations of any surrogate(s) and/or internal standards eluting in that range. C5-C8 Aliphatic Hydrocarbons exclude the concentration of Target Analytes eluting in that range

D Hydrocarbon Range data exclude concentrations of any surrogate(s) and/or internal standards eluting in that range. C9-C12 aliphatic Hydrocarbons exclude conc of Target Analytes eluting in that range AND concentration of C9-C10 Aromatic Hydrocarbons

Z A 'J' qualifier indicates an estimated value

Were all QA/QC procedures REQUIRED by the VPH Method followed? ☑ Yes ☐ No- Details Attatched

Were all performance/acceptance standards for required QA/QC procedures achieved? ☑ Yes ☐ No- Details Attatched

Were any significant modifications made to the VPH method, as specified in Sect. 11.3? ☑ No ☐ Yes- Details Attatched

I attest under the pains and penalties of perjury that, based upon my inquiry of those individuals immediately responsible for obtaining the information, the material contained in this report is, to the best of my knowledge and belief, accurate and complete

Signature [signature] Postition Laboratory Director

Printed Name H. (Brad) Madadian Date 8/25/2016

5.4 5

MADEP VPH FORM

Matrix	Aqueous ☐	Soil ☑	Sediment ☐	Other ☐	
Containers	Satisfactory ☑	Broken ☐	Leaking ☐		
Aqueous Preservatives	N/A ☑	pH <= 2 ☐	pH > 2 ☐		
Temperature	Received on Ice ☐	Received at 4 Deg. C ☐	Other ☑	Rec'd at 2 6 Deg C	
Methanol	Methanol Covering Soil, (mL Methanol/g soil; 1:1 +/- 25%)				

Method for Ranges:	MADEP VPH REV 1.1	Client ID: S-6		Lab ID: MC47325-6	
Method for Target Analytes:	MADEP VPH REV 1.1	Date Collected: 8/12/2016		Date Received: 8/16/2016	
VPH Surrogate Standards		Date Extracted:	First Date Run:	Last Date Run:	
PID:		N/A	8/18/2016	N/A	
FID:		% Solids:	Low Dilution:	High Dilution:	
		96	1	N/A	

Unadjusted Ranges	CAS #	Elution Range	Units	Result	RDL	Q
C5- C8 Aliphatics (Unadj)		N/A	mg/kg	ND A	5 8	
C9- C10 Aromatics (Unadj.)		N/A	mg/kg	ND A	5 8	
C9- C12 Aliphatics (Unadj)		N/A	mg/kg	ND A	5 8	
Target Analytes						
Ethylbenzene	100-41-4	C9-C12	mg/kg	ND	0.29	
Toluene	108-88-3	C5-C8	mg/kg	ND	0.29	
Methyl Tert Butyl Ether	1634-04-4	C5-C8	mg/kg	ND	0 058	
Benzene	71-43-2	C5-C8	mg/kg	ND	0 29	
Naphthalene	91-20-3	N/A	mg/kg	ND	0 29	
o-Xylene	95-47-6	C9-C12	mg/kg	ND	0.29	
m,p-Xylene		C9-C12	mg/kg	ND	0 29	
Adjusted Ranges						
C5- C8 Aliphatics		N/A	mg/kg	ND B	5 8	
C9- C12 Aliphatics		N/A	mg/kg	ND D	5 8	

Surrogate Recoveries			Acceptance Range
FID 2,3,4-Trifluorotoluene	%	77	70-130 %
PID 2,3,4-Trifluorotoluene	%	74	70-130 %

Footnotes

A Hydrocarbon Range data exclude concentrations of any surrogate(s) and/or internal standards eluting in that range

B Hydrocarbon Range data exclude concentrations of any surrogate(s) and/or internal standards eluting in that range. C5-C8 Aliphatic Hydrocarbons exclude the concentration of Target Analytes eluting in that range.

D Hydrocarbon Range data exclude concentrations of any surrogate(s) and/or internal standards eluting in that range. C9-C12 aliphatic Hydrocarbons exclude conc of Target Analytes eluting in that range AND concentration of C9-C10 Aromatic Hydrocarbons.

Z A 'J' qualifier indicates an estimated value

Were all QA/QC procedures REQUIRED by the VPH Method followed? ☑ Yes ☐ No- Details Attatched

Were all performance/acceptance standards for required QA/QC procedures achieved? ☑ Yes ☐ No- Details Attatched

Were any significant modifications made to the VPH method, as specified in Sect. 11.3? ☑ No ☐ Yes- Details Attatched

I attest under the pains and penalties of perjury that, based upon my inquiry of those individuals immediately responsible for obtaining the information, the material contained in this report is, to the best of my knowledge and belief, accurate and complete

Signature [signature] Postition Laboratory Director

Printed Name H. (Brad) Madadian Date 8/25/2016

5.4 5

MADEP VPH FORM

Matrix	Aqueous ___	Soil ✓	Sediment ___	Other ___	
Containers	Satisfactory ✓	Broken ___	Leaking ___		
Aqueous Preservatives	N/A ✓	pH <= 2 ___	pH > 2 ___		
Temperature	Received on Ice ___	Received at 4 Deg. C ___	Other ✓	Rec'd at 2 6 Deg C	
Methanol	Methanol Covering Soil. (mL Methanol/g soil; Other) NOTE: Ratio < 0.75 to 1				

Method for Ranges: MADEP VPH REV 1 1
Method for Target Analytes: MADEP VPH REV 1 1
VPH Surrogate Standards
PID
FID

Client ID: S-7
Date Collected: 8/12/2016
Lab ID: MC47325-7
Date Received: 8/16/2016

Date Extracted: N/A
First Date Run: 8/18/2016
Last Date Run: N/A
% Solids: 94 4
Low Dilution: 1
High Dilution: N/A

Unadjusted Ranges	CAS #	Elution Range	Units	Result	RDL	Q
C5- C8 Aliphatics (Unadj)		N/A	mg/kg	ND A	9 1	
C9- C10 Aromatics (Unadj)		N/A	mg/kg	ND A	9 1	
C9- C12 Aliphatics (Unadj)		N/A	mg/kg	ND A	9.1	
Target Analytes						
Ethylbenzene	100-41-4	C9-C12	mg/kg	ND	0.46	
Toluene	108-88-3	C5-C8	mg/kg	ND	0 46	
Methyl Tert Butyl Ether	1634-04-4	C5-C8	mg/kg	ND	0 091	
Benzene	71-43-2	C5-C8	mg/kg	ND	0 46	
Naphthalene	91-20-3	N/A	mg/kg	ND	0 46	
o-Xylene	95-47-6	C9-C12	mg/kg	ND	0 46	
m,p-Xylene		C9-C12	mg/kg	ND	0 46	
Adjusted Ranges						
C5- C8 Aliphatics		N/A	mg/kg	ND B	9 1	
C9- C12 Aliphatics		N/A	mg/kg	ND D	9.1	

Surrogate Recoveries		Acceptance Range
FID 2,3,4-Trifluorotoluene	% 76	70-130 %
PID 2,3,4-Trifluorotoluene	% 73	70-130 %

Footnotes
A Hydrocarbon Range data exclude concentrations of any surrogate(s) and/or internal standards eluting in that range
B Hydrocarbon Range data exclude concentrations of any surrogate(s) and/or internal standards eluting in that range. C5-C8 Aliphatic Hydrocarbons exclude the concentration of Target Analytes eluting in that range
D Hydrocarbon Range data exclude concentrations of any surrogate(s) and/or internal standards eluting in that range. C9-C12 aliphatic Hydrocarbons exclude conc of Target Analytes eluting in that range AND concentration of C9-C10 Aromatic Hydrocarbons
Z A 'J' qualifier indicates an estimated value

Were all QA/QC procedures REQUIRED by the VPH Method followed? ✓Yes ☐ No- Details Attatched
Were all performance acceptance standards for required QA/QC procedures achieved? ✓Yes ☐ No- Details Attatched
Were any significant modifications made to the VPH method, as specified in Sect. 11.3? ☑No ☐ Yes- Details Attatched

I attest under the pains and penalties of perjury that, based upon my inquiry of those individuals immediately responsible for obtaining the information, the material contained in this report is, to the best of my knowledge and belief, accurate and complete

Signature: [signature] Postition: Laboratory Director
Printed Name: H. (Brad) Madadian Date: 8/25/2016

MADEP VPH FORM

Matrix	Aqueous ___	Soil ✓	Sediment ___	Other ___	
Containers	Satisfactory ✓	Broken ___	Leaking ___		
Aqueous Preservatives	N/A ✓	pH <= 2 ___	pH > 2 ___		
Temperature	Received on Ice ___	Received at 4 Deg. C ___	Other ✓	Rec'd at 2 6 Deg C	
Methanol	Methanol Covering Soil. (mL Methanol/g soil; 1:1 +/- 25%)				

Method for Ranges: MADEP VPH REV 1.1
Method for Target Analytes: MADEP VPH REV 1.1
VPH Surrogate Standards
PID.
FID.

Client ID: S-8
Date Collected: 8/12/2016
Lab ID: MC47325-8
Date Received: 8/16/2016

Date Extracted: N/A
First Date Run: 8/18/2016
Last Date Run N/A
% Solids: 94 2
Low Dilution: 1
High Dilution: N/A

Unadjusted Ranges	CAS #	Elution Range	Units	Result	RDL	Q
C5- C8 Aliphatics (Unadj)		N/A	mg/kg	ND A	5 2	
C9- C10 Aromatics (Unadj)		N/A	mg/kg	ND A	5 2	
C9- C12 Aliphatics (Unadj.)		N/A	mg/kg	ND A	5 2	
Target Analytes						
Ethylbenzene	100-41-4	C9-C12	mg/kg	ND	0 26	
Toluene	108-88-3	C5-C8	mg/kg	ND	0 26	
Methyl Tert Butyl Ether	1634-04-4	C5-C8	mg/kg	ND	0 052	
Benzene	71-43-2	C5-C8	mg/kg	ND	0 26	
Naphthalene	91-20-3	N/A	mg/kg	ND	0 26	
o-Xylene	95-47-6	C9-C12	mg/kg	ND	0 26	
m,p-Xylene		C9-C12	mg/kg	ND	0.26	
Adjusted Ranges						
C5- C8 Aliphatics		N/A	mg/kg	ND B	5 2	
C9- C12 Aliphatics		N/A	mg/kg	ND D	5 2	

Surrogate Recoveries		Acceptance Range
FID 2,3,4-Trifluorotoluene	% 77	70-130 %
PID 2,3,4-Trifluorotoluene	% 74	70-130 %

Footnotes
A Hydrocarbon Range data exclude concentrations of any surrogate(s) and/or internal standards eluting in that range
B Hydrocarbon Range data exclude concentrations of any surrogate(s) and/or internal standards eluting in that range. C5-C8 Aliphatic Hydrocarbons exclude the concentration of Target Analytes eluting in that range.
D Hydrocarbon Range data exclude concentrations of any surrogate(s) and/or internal standards eluting in that range. C9-C12 aliphatic Hydrocarbons exclude conc of Target Analytes eluting in that range AND concentration of C9-C10 Aromatic Hydrocarbons
Z A 'J' qualifier indicates an estimated value

Were all QA/QC procedures REQUIRED by the VPH Method followed? ☑Yes ☐ No- Details Attatched
Were all performance/acceptance standards for required QA/QC procedures achieved? ☑Yes ☐ No- Details Attatched
Were any significant modifications made to the VPH method, as specified in Sect. 11.3? ☑No ☐ Yes- Details Attatched

I attest under the pains and penalties of perjury that, based upon my inquiry of those individuals immediately responsible for obtaining the information, the material contained in this report is, to the best of my knowledge and belief, accurate and complete

Signature: [signature] Postition: Laboratory Director
Printed Name: H. (Brad) Madadian Date: 8/25/2016

MADEP VPH FORM

Matrix	Aqueous __	Soil ✓	Sediment __	Other __	
Containers	Satisfactory ✓	Broken __	Leaking __		
Aqueous Preservatives	N/A ✓	pH <= 2 __	pH > 2 __		
Temperature	Received on Ice __	Received at 4 Deg. C __	Other ✓	Rec'd at 2.6 Deg. C	
Methanol	Methanol Covering Soil. (mL Methanol/g soil: 1:1 +/- 25%)				

Method for Ranges:	MADEP VPH REV 1.1	Client ID: STOCKPILE		Lab ID: MC47325-9	
Method for Target Analytes:	MADEP VPH REV 1.1	Date Collected: 8/12/2016		Date Received: 8/16/2016	
VPH Surrogate Standards		Date Extracted:	First Date Run:	Last Date Run:	
PID		N/A	8/18/2016	N/A	
FID		% Solids:	Low Dilution:	High Dilution:	
		90.9	1	N/A	

Unadjusted Ranges	CAS #	Elution Range	Units	Result	RDL	Q
C5- C8 Aliphatics (Unadj.)		N/A	mg/kg	130 A	6.3	
C9- C10 Aromatics (Unadj.)		N/A	mg/kg	566 A	6.3	
C9- C12 Aliphatics (Unadj.)		N/A	mg/kg	1040 A	6.3	
Target Analytes						
Ethylbenzene	100-41-4	C9-C12	mg/kg	13.6	0.31	
Toluene	108-88-3	C5-C8	mg/kg	11	0.31	
Methyl Tert Butyl Ether	1634-04-4	C5-C8	mg/kg	ND	0.063	
Benzene	71-43-2	C5-C8	mg/kg	0.434	0.31	
Naphthalene	91-20-3	N/A	mg/kg	23.3	0.31	
o-Xylene	95-47-6	C9-C12	mg/kg	23.7	0.31	
m,p-Xylene		C9-C12	mg/kg	39.4	0.31	
Adjusted Ranges						
C5- C8 Aliphatics		N/A	mg/kg	118 B	6.3	
C9- C12 Aliphatics		N/A	mg/kg	398 D	6.3	

Surrogate Recoveries			Acceptance Range
FID 2,3,4-Trifluorotoluene	%	83	70-130 %
PID 2,3,4-Trifluorotoluene	%	78	70-130 %

Footnotes:

A Hydrocarbon Range data exclude concentrations of any surrogate(s) and/or internal standards eluting in that range

B Hydrocarbon Range data exclude concentrations of any surrogate(s) and/or internal standards eluting in that range. C5-C8 Aliphatic Hydrocarbons exclude the concentration of Target Analytes eluting in that range

D Hydrocarbon Range data exclude concentrations of any surrogate(s) and/or internal standards eluting in that range. C9-C12 aliphatic Hydrocarbons exclude conc of Target Analytes eluting in that range AND concentration of C9-C10 Aromatic Hydrocarbons

Z A "J" qualifier indicates an estimated value

Were all QA/QC procedures REQUIRED by the VPH Method followed? ✓ Yes ☐ No- Details Attatched

Were all performance/acceptance standards for required QA/QC procedures achieved? ☑ Yes ☐ No- Details Attatched

Were any significant modifications made to the VPH method, as specified in Sect. 11.3? ✓ No ☐ Yes- Details Attatched

I attest under the pains and penalties of perjury that, based upon my inquiry of those individuals immediately responsible for obtaining the information, the material contained in this report is, to the best of my knowledge and belief, accurate and complete

Signature _____ Position Laboratory Director

Printed Name H. (Brad) Madadian Date 8/25/2016

Internal Sample Tracking Chronicle

EnviroTrac

Job No: MC47325

Maggiore Somerville, 343 - 351 Summer Street, Somerville, MA
Project No: 03.990202.00

Sample Number	Method	Analyzed	By	Prepped	By	Test Codes
MC47325-1	Collected: 12-AUG-16 10:00 By: FM S-1			Received: 16-AUG-16 By: NT		
MC47325-1	SM 2540G-97 MOD	17-AUG-16	CF			%SOL
MC47325-1	MADEP VPH REV 1.1	18-AUG-16 12:47	DF			VMAVPH
MC47325-1	MADEP EPH REV 1.1	24-AUG-16 15:35	TA	17-AUG-16	NE	BMAEPH
MC47325-2	Collected: 12-AUG-16 11:15 By: FM S-2			Received: 16-AUG-16 By: NT		
MC47325-2	SM 2540G-97 MOD	17-AUG-16	CF			%SOL
MC47325-2	MADEP VPH REV 1.1	18-AUG-16 13:25	DF			VMAVPH
MC47325-2	MADEP EPH REV 1.1	23-AUG-16 22:14	TA	17-AUG-16	IC	BMAEPH
MC47325-3	Collected: 12-AUG-16 12:00 By: FM S-3			Received: 16-AUG-16 By: NT		
MC47325-3	SM 2540G-97 MOD	17-AUG-16	CF			%SOL
MC47325-3	MADEP VPH REV 1.1	18-AUG-16 14:04	DF			VMAVPH
MC47325-3	MADEP EPH REV 1.1	23-AUG-16 22:41	TA	17-AUG-16	IC	BMAEPH
MC47325-3	MADEP EPH REV 1.1	24-AUG-16 10:41	TA	17-AUG-16	IC	BMAEPH
MC47325-4	Collected: 12-AUG-16 11:00 By: FM S-4			Received: 16-AUG-16 By: NT		
MC47325-4	SM 2540G-97 MOD	17-AUG-16	CF			%SOL
MC47325-4	MADEP VPH REV 1.1	18-AUG-16 14:42	DF			VMAVPH
MC47325-4	MADEP EPH REV 1.1	23-AUG-16 23:09	TA	17-AUG-16	IC	BMAEPH
MC47325-5	Collected: 12-AUG-16 12:30 By: FM S-5			Received: 16-AUG-16 By: NT		
MC47325-5	SM 2540G-97 MOD	17-AUG-16	CF			%SOL
MC47325-5	MADEP VPH REV 1.1	18-AUG-16 15:21	DF			VMAVPH
MC47325-5	MADEP EPH REV 1.1	23-AUG-16 23:37	TA	17-AUG-16	IC	BMAEPH
MC47325-6	Collected: 12-AUG-16 12:35 By: FM S-6			Received: 16-AUG-16 By: NT		
MC47325-6	SM 2540G-97 MOD	17-AUG-16	CF			%SOL

Internal Sample Tracking Chronicle

EnviroTrac

Job No: MC47325

Maggiore Somerville, 343 - 351 Summer Street, Somerville, MA
Project No: 03.990202.00

Sample Number	Method	Analyzed	By	Prepped	By	Test Codes
MC47325-6	MADEP VPH REV 1.1	18-AUG-16 15:59	DF			VMAVPH
MC47325-6	MADEP EPH REV 1.1	24-AUG-16 00:05	TA	17-AUG-16	IC	BMAEPH
MC47325-7 Collected: 12-AUG-16 13:00 By: FM Received: 16-AUG-16 By: NT						
S-7						
MC47325-7	SM 2540G-97 MOD	17-AUG-16	CF			%SOL
MC47325-7	MADEP VPH REV 1.1	18-AUG-16 16:37	DF			VMAVPH
MC47325-7	MADEP EPH REV 1.1	24-AUG-16 00:32	TA	17-AUG-16	IC	BMAEPH
MC47325-8 Collected: 12-AUG-16 13:15 By: FM Received: 16-AUG-16 By: NT						
S-8						
MC47325-8	SM 2540G-97 MOD	17-AUG-16	CF			%SOL
MC47325-8	MADEP VPH REV 1.1	18-AUG-16 17:15	DF			VMAVPH
MC47325-8	MADEP EPH REV 1.1	24-AUG-16 01:28	TA	17-AUG-16	IC	BMAEPH
MC47325-9 Collected: 12-AUG-16 14:00 By: FM Received: 16-AUG-16 By: NT						
STOCKPILE						
MC47325-9	SW846 1020	17-AUG-16	BF			IGN
MC47325-9	SM 2540G-97 MOD	17-AUG-16	CF			%SOL
MC47325-9	SW846 9045D	17-AUG-16 15:45	EL			PH
MC47325-9	SW846 CHAP7	18-AUG-16	BF	18-AUG-16	CF	SREAC
MC47325-9	SW846 8260C	18-AUG-16 17:14	TB			V8260MCP
MC47325-9	MADEP VPH REV 1.1	18-AUG-16 17:53	DF			VMAVPH
MC47325-9	SW846 6010C	19-AUG-16 13:34	EAL	18-AUG-16	EM	AS,BA,BE,CD,CR,NI,PB,SB,SE, TL,V,ZN
MC47325-9	SW846 CHAP7	19-AUG-16 17:49	CF	18-AUG-16	CF	CREAC
MC47325-9	SW846 8082A	20-AUG-16 17:08	AP	17-AUG-16	PA	P8082MCP
MC47325-9	EPA 120.1M	22-AUG-16	CF			SCON
MC47325-9	SW846 7471B	22-AUG-16 13:47	EAL	19-AUG-16	EM	HG
MC47325-9	SW846 6010C	22-AUG-16 16:36	EAL	18-AUG-16	EM	AG
MC47325-9	SW846 8270D	23-AUG-16 01:45	MR	18-AUG-16	HBM	AB8270MCP
MC47325-9	MADEP EPH REV 1.1	24-AUG-16 01:56	TA	17-AUG-16	AW	BMAEPH
MC47325-9	MADEP EPH REV 1.1	24-AUG-16 11:27	TA	17-AUG-16	AW	BMAEPH

QC Evaluation: MA MCP Limits

Job Number: MC47325
Account: EnviroTrac
Project: Maggiore Somerville, 343 - 351 Summer Street, Somerville, MA
Collected: 08/12/16

QC Sample ID	CAS#	Analyte	Sample Type	Result Type	Result	Units	Limits
MSL4331	SW846 8260C						
MSL4331-BS	67-64-1	Acetone	BSP	REC	126	%	70-130
MSL4331-BS	71-43-2	Benzene	BSP	REC	100	%	70-130
MSL4331-BS	108-86-1	Bromobenzene	BSP	REC	94	%	70-130
MSL4331-BS	74-97-5	Bromochloromethane	BSP	REC	100	%	70-130
MSL4331-BS	75-27-4	Bromodichloromethane	BSP	REC	97	%	70-130
MSL4331-BS	75-25-2	Bromoform	BSP	REC	96	%	70-130
MSL4331-BS	74-83-9	Bromomethane	BSP	REC	193 [a]	%	70-130
MSL4331-BS	78-93-3	2-Butanone (MEK)	BSP	REC	193 [a]	%	70-130
MSL4331-BS	104-51-8	n-Butylbenzene	BSP	REC	110	%	70-130
MSL4331-BS	135-98-8	sec-Butylbenzene	BSP	REC	96	%	70-130
MSL4331-BS	98-06-6	tert-Butylbenzene	BSP	REC	95	%	70-130
MSL4331-BS	75-15-0	Carbon disulfide	BSP	REC	102	%	70-130
MSL4331-BS	56-23-5	Carbon tetrachloride	BSP	REC	105	%	70-130
MSL4331-BS	108-90-7	Chlorobenzene	BSP	REC	92	%	70-130
MSL4331-BS	75-00-3	Chloroethane	BSP	REC	119	%	70-130
MSL4331-BS	67-66-3	Chloroform	BSP	REC	102	%	70-130
MSL4331-BS	74-87-3	Chloromethane	BSP	REC	121	%	70-130
MSL4331-BS	95-49-8	o-Chlorotoluene	BSP	REC	102	%	70-130
MSL4331-BS	106-43-4	p-Chlorotoluene	BSP	REC	100	%	70-130
MSL4331-BS	108-20-3	Di-Isopropyl ether	BSP	REC	116	%	70-130
MSL4331-BS	96-12-8	1,2-Dibromo-3-chloropropane	BSP	REC	94	%	70-130
MSL4331-BS	124-48-1	Dibromochloromethane	BSP	REC	92	%	70-130
MSL4331-BS	106-93-4	1,2-Dibromoethane	BSP	REC	94	%	70-130
MSL4331-BS	95-50-1	1,2-Dichlorobenzene	BSP	REC	97	%	70-130
MSL4331-BS	541-73-1	1,3-Dichlorobenzene	BSP	REC	96	%	70-130
MSL4331-BS	106-46-7	1,4-Dichlorobenzene	BSP	REC	94	%	70-130
MSL4331-BS	75-71-8	Dichlorodifluoromethane	BSP	REC	66	%	70-130
MSL4331-BS	75-34-3	1,1-Dichloroethane	BSP	REC	101	%	70-130
MSL4331-BS	107-06-2	1,2-Dichloroethane	BSP	REC	104	%	70-130
MSL4331-BS	75-35-4	1,1-Dichloroethene	BSP	REC	106	%	70-130
MSL4331-BS	156-59-2	cis-1,2-Dichloroethene	BSP	REC	112	%	70-130
MSL4331-BS	156-60-5	trans-1,2-Dichloroethene	BSP	REC	95	%	70-130
MSL4331-BS	78-87-5	1,2-Dichloropropane	BSP	REC	98	%	70-130
MSL4331-BS	142-28-9	1,3-Dichloropropane	BSP	REC	98	%	70-130
MSL4331-BS	594-20-7	2,2-Dichloropropane	BSP	REC	119	%	70-130
MSL4331-BS	563-58-6	1,1-Dichloropropene	BSP	REC	106	%	70-130
MSL4331-BS	10061-01-5	cis-1,3-Dichloropropene	BSP	REC	93	%	70-130
MSL4331-BS	10061-02-6	trans-1,3-Dichloropropene	BSP	REC	94	%	70-130
MSL4331-BS	123-91-1	1,4-Dioxane	BSP	REC	70	%	70-130
MSL4331-BS	60-29-7	Ethyl Ether	BSP	REC	102	%	70-130
MSL4331-BS	100-41-4	Ethylbenzene	BSP	REC	95	%	70-130
MSL4331-BS	87-68-3	Hexachlorobutadiene	BSP	REC	89	%	70-130

* Sample used for QC is not from job MC47325

QC Evaluation: MA MCP Limits

Job Number: MC47325
Account: EnviroTrac
Project: Maggiore Somerville, 343 - 351 Summer Street, Somerville, MA
Collected: 08/12/16

QC Sample ID	CAS#	Analyte	Sample Type	Result Type	Result	Units	Limits
MSL4331-BS	591-78-6	2-Hexanone	BSP	REC	127	%	70-130
MSL4331-BS	98-82-8	Isopropylbenzene	BSP	REC	92	%	70-130
MSL4331-BS	99-87-6	p-Isopropyltoluene	BSP	REC	98	%	70-130
MSL4331-BS	1634-04-4	Methyl Tert Butyl Ether	BSP	REC	114	%	70-130
MSL4331-BS	108-10-1	4-Methyl-2-pentanone (MIBK)	BSP	REC	108	%	70-130
MSL4331-BS	74-95-3	Methylene bromide	BSP	REC	94	%	70-130
MSL4331-BS	75-09-2	Methylene chloride	BSP	REC	100	%	70-130
MSL4331-BS	91-20-3	Naphthalene	BSP	REC	85	%	70-130
MSL4331-BS	103-65-1	n-Propylbenzene	BSP	REC	100	%	70-130
MSL4331-BS	100-42-5	Styrene	BSP	REC	94	%	70-130
MSL4331-BS	994-05-8	tert-Amyl Methyl Ether	BSP	REC	112	%	70-130
MSL4331-BS	637-92-3	tert-Butyl Ethyl Ether	BSP	REC	98	%	70-130
MSL4331-BS	630-20-6	1,1,1,2-Tetrachloroethane	BSP	REC	95	%	70-130
MSL4331-BS	79-34-5	1,1,2,2-Tetrachloroethane	BSP	REC	96	%	70-130
MSL4331-BS	127-18-4	Tetrachloroethene	BSP	REC	92	%	70-130
MSL4331-BS	109-99-9	Tetrahydrofuran	BSP	REC	102	%	70-130
MSL4331-BS	108-88-3	Toluene	BSP	REC	99	%	70-130
MSL4331-BS	87-61-6	1,2,3-Trichlorobenzene	BSP	REC	86	%	70-130
MSL4331-BS	120-82-1	1,2,4-Trichlorobenzene	BSP	REC	91	%	70-130
MSL4331-BS	71-55-6	1,1,1-Trichloroethane	BSP	REC	104	%	70-130
MSL4331-BS	79-00-5	1,1,2-Trichloroethane	BSP	REC	94	%	70-130
MSL4331-BS	79-01-6	Trichloroethene	BSP	REC	95	%	70-130
MSL4331-BS	75-69-4	Trichlorofluoromethane	BSP	REC	92	%	70-130
MSL4331-BS	96-18-4	1,2,3-Trichloropropane	BSP	REC	93	%	70-130
MSL4331-BS	95-63-6	1,2,4-Trimethylbenzene	BSP	REC	101	%	70-130
MSL4331-BS	108-67-8	1,3,5-Trimethylbenzene	BSP	REC	107	%	70-130
MSL4331-BS	75-01-4	Vinyl chloride	BSP	REC	95	%	70-130
MSL4331-BS		m,p-Xylene	BSP	REC	94	%	70-130
MSL4331-BS	95-47-6	o-Xylene	BSP	REC	92	%	70-130
MSL4331-BS	1330-20-7	Xylene (total)	BSP	REC	93	%	70-130
MSL4331-BS	1868-53-7	Dibromofluoromethane	BSP	SURR	104	%	70-130
MSL4331-BS	2037-26-5	Toluene-D8	BSP	SURR	97	%	70-130
MSL4331-BS	460-00-4	4-Bromofluorobenzene	BSP	SURR	96	%	70-130
MSL4331-BSD	67-64-1	Acetone	BSD	REC	121	%	70-130
MSL4331-BSD	67-64-1	Acetone	BSD	RPD	4	%	20
MSL4331-BSD	71-43-2	Benzene	BSD	REC	97	%	70-130
MSL4331-BSD	71-43-2	Benzene	BSD	RPD	3	%	20
MSL4331-BSD	108-86-1	Bromobenzene	BSD	REC	92	%	70-130
MSL4331-BSD	108-86-1	Bromobenzene	BSD	RPD	2	%	20
MSL4331-BSD	74-97-5	Bromochloromethane	BSD	REC	96	%	70-130
MSL4331-BSD	74-97-5	Bromochloromethane	BSD	RPD	4	%	20
MSL4331-BSD	75-27-4	Bromodichloromethane	BSD	REC	96	%	70-130
MSL4331-BSD	75-27-4	Bromodichloromethane	BSD	RPD	1	%	20
MSL4331-BSD	75-25-2	Bromoform	BSD	REC	96	%	70-130
MSL4331-BSD	75-25-2	Bromoform	BSD	RPD	0	%	20

* Sample used for QC is not from job MC47325

QC Evaluation: MA MCP Limits

Job Number: MC47325
Account: EnviroTrac
Project: Maggiore Somerville, 343 - 351 Summer Street, Somerville, MA
Collected: 08/12/16

QC Sample ID	CAS#	Analyte	Sample Type	Result Type	Result	Units	Limits
MSL4331-BSD	74-83-9	Bromomethane	BSD	REC	190 [a]	%	70-130
MSL4331-BSD	74-83-9	Bromomethane	BSD	RPD	1	%	20
MSL4331-BSD	78-93-3	2-Butanone (MEK)	BSD	REC	182 [a]	%	70-130
MSL4331-BSD	78-93-3	2-Butanone (MEK)	BSD	RPD	6	%	20
MSL4331-BSD	104-51-8	n-Butylbenzene	BSD	REC	108	%	70-130
MSL4331-BSD	104-51-8	n-Butylbenzene	BSD	RPD	3	%	20
MSL4331-BSD	135-98-8	sec-Butylbenzene	BSD	REC	94	%	70-130
MSL4331-BSD	135-98-8	sec-Butylbenzene	BSD	RPD	3	%	20
MSL4331-BSD	98-06-6	tert-Butylbenzene	BSD	REC	93	%	70-130
MSL4331-BSD	98-06-6	tert-Butylbenzene	BSD	RPD	2	%	20
MSL4331-BSD	75-15-0	Carbon disulfide	BSD	REC	96	%	70-130
MSL4331-BSD	75-15-0	Carbon disulfide	BSD	RPD	6	%	20
MSL4331-BSD	56-23-5	Carbon tetrachloride	BSD	REC	101	%	70-130
MSL4331-BSD	56-23-5	Carbon tetrachloride	BSD	RPD	4	%	20
MSL4331-BSD	108-90-7	Chlorobenzene	BSD	REC	92	%	70-130
MSL4331-BSD	108-90-7	Chlorobenzene	BSD	RPD	0	%	20
MSL4331-BSD	75-00-3	Chloroethane	BSD	REC	112	%	70-130
MSL4331-BSD	75-00-3	Chloroethane	BSD	RPD	6	%	20
MSL4331-BSD	67-66-3	Chloroform	BSD	REC	98	%	70-130
MSL4331-BSD	67-66-3	Chloroform	BSD	RPD	4	%	20
MSL4331-BSD	74-87-3	Chloromethane	BSD	REC	116	%	70-130
MSL4331-BSD	74-87-3	Chloromethane	BSD	RPD	4	%	20
MSL4331-BSD	95-49-8	o-Chlorotoluene	BSD	REC	99	%	70-130
MSL4331-BSD	95-49-8	o-Chlorotoluene	BSD	RPD	2	%	20
MSL4331-BSD	106-43-4	p-Chlorotoluene	BSD	REC	98	%	70-130
MSL4331-BSD	106-43-4	p-Chlorotoluene	BSD	RPD	2	%	20
MSL4331-BSD	108-20-3	Di-Isopropyl ether	BSD	REC	114	%	70-130
MSL4331-BSD	108-20-3	Di-Isopropyl ether	BSD	RPD	2	%	20
MSL4331-BSD	96-12-8	1,2-Dibromo-3-chloropropane	BSD	REC	92	%	70-130
MSL4331-BSD	96-12-8	1,2-Dibromo-3-chloropropane	BSD	RPD	1	%	20
MSL4331-BSD	124-48-1	Dibromochloromethane	BSD	REC	92	%	70-130
MSL4331-BSD	124-48-1	Dibromochloromethane	BSD	RPD	0	%	20
MSL4331-BSD	106-93-4	1,2-Dibromoethane	BSD	REC	94	%	70-130
MSL4331-BSD	106-93-4	1,2-Dibromoethane	BSD	RPD	0	%	20
MSL4331-BSD	95-50-1	1,2-Dichlorobenzene	BSD	REC	96	%	70-130
MSL4331-BSD	95-50-1	1,2-Dichlorobenzene	BSD	RPD	2	%	20
MSL4331-BSD	541-73-1	1,3-Dichlorobenzene	BSD	REC	95	%	70-130
MSL4331-BSD	541-73-1	1,3-Dichlorobenzene	BSD	RPD	0	%	20
MSL4331-BSD	106-46-7	1,4-Dichlorobenzene	BSD	REC	94	%	70-130
MSL4331-BSD	106-46-7	1,4-Dichlorobenzene	BSD	RPD	1	%	20
MSL4331-BSD	75-71-8	Dichlorodifluoromethane	BSD	REC	62	%	70-130
MSL4331-BSD	75-71-8	Dichlorodifluoromethane	BSD	RPD	6	%	20
MSL4331-BSD	75-34-3	1,1-Dichloroethane	BSD	REC	97	%	70-130
MSL4331-BSD	75-34-3	1,1-Dichloroethane	BSD	RPD	4	%	20
MSL4331-BSD	107-06-2	1,2-Dichloroethane	BSD	REC	100	%	70-130

* Sample used for QC is not from job MC47325

QC Evaluation: MA MCP Limits

Job Number: MC47325
Account: EnviroTrac
Project: Maggiore Somerville, 343 - 351 Summer Street, Somerville, MA
Collected: 08/12/16

QC Sample ID	CAS#	Analyte	Sample Type	Result Type	Result	Units	Limits
MSL4331-BSD	107-06-2	1,2-Dichloroethane	BSD	RPD	3	%	20
MSL4331-BSD	75-35-4	1,1-Dichloroethene	BSD	REC	101	%	70-130
MSL4331-BSD	75-35-4	1,1-Dichloroethene	BSD	RPD	5	%	20
MSL4331-BSD	156-59-2	cis-1,2-Dichloroethene	BSD	REC	107	%	70-130
MSL4331-BSD	156-59-2	cis-1,2-Dichloroethene	BSD	RPD	5	%	20
MSL4331-BSD	156-60-5	trans-1,2-Dichloroethene	BSD	REC	90	%	70-130
MSL4331-BSD	156-60-5	trans-1,2-Dichloroethene	BSD	RPD	6	%	20
MSL4331-BSD	78-87-5	1,2-Dichloropropane	BSD	REC	96	%	70-130
MSL4331-BSD	78-87-5	1,2-Dichloropropane	BSD	RPD	2	%	20
MSL4331-BSD	142-28-9	1,3-Dichloropropane	BSD	REC	98	%	70-130
MSL4331-BSD	142-28-9	1,3-Dichloropropane	BSD	RPD	1	%	20
MSL4331-BSD	594-20-7	2,2-Dichloropropane	BSD	REC	112	%	70-130
MSL4331-BSD	594-20-7	2,2-Dichloropropane	BSD	RPD	6	%	20
MSL4331-BSD	563-58-6	1,1-Dichloropropene	BSD	REC	102	%	70-130
MSL4331-BSD	563-58-6	1,1-Dichloropropene	BSD	RPD	4	%	20
MSL4331-BSD	10061-01-5	cis-1,3-Dichloropropene	BSD	REC	92	%	70-130
MSL4331-BSD	10061-01-5	cis-1,3-Dichloropropene	BSD	RPD	1	%	20
MSL4331-BSD	10061-02-6	trans-1,3-Dichloropropene	BSD	REC	92	%	70-130
MSL4331-BSD	10061-02-6	trans-1,3-Dichloropropene	BSD	RPD	2	%	20
MSL4331-BSD	123-91-1	1,4-Dioxane	BSD	REC	67	%	70-130
MSL4331-BSD	123-91-1	1,4-Dioxane	BSD	RPD	4	%	20
MSL4331-BSD	60-29-7	Ethyl Ether	BSD	REC	101	%	70-130
MSL4331-BSD	60-29-7	Ethyl Ether	BSD	RPD	1	%	20
MSL4331-BSD	100-41-4	Ethylbenzene	BSD	REC	94	%	70-130
MSL4331-BSD	100-41-4	Ethylbenzene	BSD	RPD	1	%	20
MSL4331-BSD	87-68-3	Hexachlorobutadiene	BSD	REC	86	%	70-130
MSL4331-BSD	87-68-3	Hexachlorobutadiene	BSD	RPD	3	%	20
MSL4331-BSD	591-78-6	2-Hexanone	BSD	REC	124	%	70-130
MSL4331-BSD	591-78-6	2-Hexanone	BSD	RPD	3	%	20
MSL4331-BSD	98-82-8	Isopropylbenzene	BSD	REC	90	%	70-130
MSL4331-BSD	98-82-8	Isopropylbenzene	BSD	RPD	3	%	20
MSL4331-BSD	99-87-6	p-Isopropyltoluene	BSD	REC	96	%	70-130
MSL4331-BSD	99-87-6	p-Isopropyltoluene	BSD	RPD	3	%	20
MSL4331-BSD	1634-04-4	Methyl Tert Butyl Ether	BSD	REC	111	%	70-130
MSL4331-BSD	1634-04-4	Methyl Tert Butyl Ether	BSD	RPD	2	%	20
MSL4331-BSD	108-10-1	4-Methyl-2-pentanone (MIBK)	BSD	REC	104	%	70-130
MSL4331-BSD	108-10-1	4-Methyl-2-pentanone (MIBK)	BSD	RPD	4	%	20
MSL4331-BSD	74-95-3	Methylene bromide	BSD	REC	92	%	70-130
MSL4331-BSD	74-95-3	Methylene bromide	BSD	RPD	3	%	20
MSL4331-BSD	75-09-2	Methylene chloride	BSD	REC	96	%	70-130
MSL4331-BSD	75-09-2	Methylene chloride	BSD	RPD	4	%	20
MSL4331-BSD	91-20-3	Naphthalene	BSD	REC	82	%	70-130
MSL4331-BSD	91-20-3	Naphthalene	BSD	RPD	4	%	20
MSL4331-BSD	103-65-1	n-Propylbenzene	BSD	REC	97	%	70-130
MSL4331-BSD	103-65-1	n-Propylbenzene	BSD	RPD	3	%	20

* Sample used for QC is not from job MC47325

QC Evaluation: MA MCP Limits

Job Number: MC47325
Account: EnviroTrac
Project: Maggiore Somerville, 343 - 351 Summer Street, Somerville, MA
Collected: 08/12/16

QC Sample ID	CAS#	Analyte	Sample Type	Result Type	Result	Units	Limits
MSL4331-BSD	100-42-5	Styrene	BSD	REC	92	%	70-130
MSL4331-BSD	100-42-5	Styrene	BSD	RPD	2	%	20
MSL4331-BSD	994-05-8	tert-Amyl Methyl Ether	BSD	REC	110	%	70-130
MSL4331-BSD	994-05-8	tert-Amyl Methyl Ether	BSD	RPD	2	%	20
MSL4331-BSD	637-92-3	tert-Butyl Ethyl Ether	BSD	REC	96	%	70-130
MSL4331-BSD	637-92-3	tert-Butyl Ethyl Ether	BSD	RPD	2	%	20
MSL4331-BSD	630-20-6	1,1,1,2-Tetrachloroethane	BSD	REC	94	%	70-130
MSL4331-BSD	630-20-6	1,1,1,2-Tetrachloroethane	BSD	RPD	1	%	20
MSL4331-BSD	79-34-5	1,1,2,2-Tetrachloroethane	BSD	REC	94	%	70-130
MSL4331-BSD	79-34-5	1,1,2,2-Tetrachloroethane	BSD	RPD	2	%	20
MSL4331-BSD	127-18-4	Tetrachloroethene	BSD	REC	92	%	70-130
MSL4331-BSD	127-18-4	Tetrachloroethene	BSD	RPD	0	%	20
MSL4331-BSD	109-99-9	Tetrahydrofuran	BSD	REC	102	%	70-130
MSL4331-BSD	109-99-9	Tetrahydrofuran	BSD	RPD	0	%	20
MSL4331-BSD	108-88-3	Toluene	BSD	REC	96	%	70-130
MSL4331-BSD	108-88-3	Toluene	BSD	RPD	3	%	20
MSL4331-BSD	87-61-6	1,2,3-Trichlorobenzene	BSD	REC	83	%	70-130
MSL4331-BSD	87-61-6	1,2,3-Trichlorobenzene	BSD	RPD	4	%	20
MSL4331-BSD	120-82-1	1,2,4-Trichlorobenzene	BSD	REC	88	%	70-130
MSL4331-BSD	120-82-1	1,2,4-Trichlorobenzene	BSD	RPD	3	%	20
MSL4331-BSD	71-55-6	1,1,1-Trichloroethane	BSD	REC	100	%	70-130
MSL4331-BSD	71-55-6	1,1,1-Trichloroethane	BSD	RPD	5	%	20
MSL4331-BSD	79-00-5	1,1,2-Trichloroethane	BSD	REC	92	%	70-130
MSL4331-BSD	79-00-5	1,1,2-Trichloroethane	BSD	RPD	3	%	20
MSL4331-BSD	79-01-6	Trichloroethene	BSD	REC	93	%	70-130
MSL4331-BSD	79-01-6	Trichloroethene	BSD	RPD	3	%	20
MSL4331-BSD	75-69-4	Trichlorofluoromethane	BSD	REC	87	%	70-130
MSL4331-BSD	75-69-4	Trichlorofluoromethane	BSD	RPD	6	%	20
MSL4331-BSD	96-18-4	1,2,3-Trichloropropane	BSD	REC	92	%	70-130
MSL4331-BSD	96-18-4	1,2,3-Trichloropropane	BSD	RPD	1	%	20
MSL4331-BSD	95-63-6	1,2,4-Trimethylbenzene	BSD	REC	99	%	70-130
MSL4331-BSD	95-63-6	1,2,4-Trimethylbenzene	BSD	RPD	2	%	20
MSL4331-BSD	108-67-8	1,3,5-Trimethylbenzene	BSD	REC	104	%	70-130
MSL4331-BSD	108-67-8	1,3,5-Trimethylbenzene	BSD	RPD	3	%	20
MSL4331-BSD	75-01-4	Vinyl chloride	BSD	REC	89	%	70-130
MSL4331-BSD	75-01-4	Vinyl chloride	BSD	RPD	7	%	20
MSL4331-BSD		m,p-Xylene	BSD	REC	92	%	70-130
MSL4331-BSD		m,p-Xylene	BSD	RPD	2	%	20
MSL4331-BSD	95-47-6	o-Xylene	BSD	REC	93	%	70-130
MSL4331-BSD	95-47-6	o-Xylene	BSD	RPD	1	%	20
MSL4331-BSD	1330-20-7	Xylene (total)	BSD	REC	92	%	70-130
MSL4331-BSD	1330-20-7	Xylene (total)	BSD	RPD	1	%	20
MSL4331-BSD	1868-53-7	Dibromofluoromethane	BSD	SURR	102	%	70-130
MSL4331-BSD	2037-26-5	Toluene-D8	BSD	SURR	96	%	70-130
MSL4331-BSD	460-00-4	4-Bromofluorobenzene	BSD	SURR	97	%	70-130

* Sample used for QC is not from job MC47325

QC Evaluation: MA MCP Limits

Job Number: MC47325
Account: EnviroTrac
Project: Maggiore Somerville, 343 - 351 Summer Street, Somerville, MA
Collected: 08/12/16

QC Sample ID	CAS#	Analyte	Sample Type	Result Type	Result	Units	Limits
MSL4331-MB	1868-53-7	Dibromofluoromethane	MB	SURR	119	%	70-130
MSL4331-MB	2037-26-5	Toluene-D8	MB	SURR	98	%	70-130
MSL4331-MB	460-00-4	4-Bromofluorobenzene	MB	SURR	108	%	70-130
MC47325-9	1868-53-7	Dibromofluoromethane	SAMP	SURR	113	%	70-130
MC47325-9	2037-26-5	Toluene-D8	SAMP	SURR	102	%	70-130
MC47325-9	460-00-4	4-Bromofluorobenzene	SAMP	SURR	96	%	70-130
OP48454	SW846 8270D						
OP48454-BS	65-85-0	Benzoic acid	BSP	REC	96	%	30-130
OP48454-BS	95-57-8	2-Chlorophenol	BSP	REC	69	%	30-130
OP48454-BS	59-50-7	4-Chloro-3-methyl phenol	BSP	REC	84	%	30-130
OP48454-BS	120-83-2	2,4-Dichlorophenol	BSP	REC	82	%	30-130
OP48454-BS	105-67-9	2,4-Dimethylphenol	BSP	REC	77	%	30-130
OP48454-BS	51-28-5	2,4-Dinitrophenol	BSP	REC	87	%	30-130
OP48454-BS	95-48-7	2-Methylphenol	BSP	REC	71	%	30-130
OP48454-BS		3&4-Methylphenol	BSP	REC	74	%	30-130
OP48454-BS	88-75-5	2-Nitrophenol	BSP	REC	69	%	30-130
OP48454-BS	100-02-7	4-Nitrophenol	BSP	REC	79	%	30-130
OP48454-BS	87-86-5	Pentachlorophenol	BSP	REC	92	%	30-130
OP48454-BS	108-95-2	Phenol	BSP	REC	74	%	30-130
OP48454-BS	95-95-4	2,4,5-Trichlorophenol	BSP	REC	86	%	30-130
OP48454-BS	88-06-2	2,4,6-Trichlorophenol	BSP	REC	87	%	30-130
OP48454-BS	83-32-9	Acenaphthene	BSP	REC	72	%	40-140
OP48454-BS	208-96-8	Acenaphthylene	BSP	REC	56	%	40-140
OP48454-BS	98-86-2	Acetophenone	BSP	REC	59	%	40-140
OP48454-BS	62-53-3	Aniline	BSP	REC	49	%	40-140
OP48454-BS	120-12-7	Anthracene	BSP	REC	72	%	40-140
OP48454-BS	56-55-3	Benzo(a)anthracene	BSP	REC	75	%	40-140
OP48454-BS	50-32-8	Benzo(a)pyrene	BSP	REC	69	%	40-140
OP48454-BS	205-99-2	Benzo(b)fluoranthene	BSP	REC	71	%	40-140
OP48454-BS	191-24-2	Benzo(g,h,i)perylene	BSP	REC	75	%	40-140
OP48454-BS	207-08-9	Benzo(k)fluoranthene	BSP	REC	72	%	40-140
OP48454-BS	101-55-3	4-Bromophenyl phenyl ether	BSP	REC	76	%	40-140
OP48454-BS	85-68-7	Butyl benzyl phthalate	BSP	REC	81	%	40-140
OP48454-BS	91-58-7	2-Chloronaphthalene	BSP	REC	70	%	40-140
OP48454-BS	106-47-8	4-Chloroaniline	BSP	REC	43	%	40-140
OP48454-BS	218-01-9	Chrysene	BSP	REC	74	%	40-140
OP48454-BS	111-91-1	bis(2-Chloroethoxy)methane	BSP	REC	65	%	40-140
OP48454-BS	111-44-4	bis(2-Chloroethyl)ether	BSP	REC	55	%	40-140
OP48454-BS	108-60-1	bis(2-Chloroisopropyl)ether	BSP	REC	62	%	40-140
OP48454-BS	95-50-1	1,2-Dichlorobenzene	BSP	REC	53	%	40-140
OP48454-BS	122-66-7	1,2-Diphenylhydrazine	BSP	REC	74	%	40-140
OP48454-BS	541-73-1	1,3-Dichlorobenzene	BSP	REC	50	%	40-140
OP48454-BS	106-46-7	1,4-Dichlorobenzene	BSP	REC	49	%	40-140

5.6

* Sample used for QC is not from job MC47325

QC Evaluation: MA MCP Limits

Job Number: MC47325
Account: EnviroTrac
Project: Maggiore Somerville, 343 - 351 Summer Street, Somerville, MA
Collected: 08/12/16

QC Sample ID	CAS#	Analyte	Sample Type	Result Type	Result	Units	Limits
OP48454-BS	121-14-2	2,4-Dinitrotoluene	BSP	REC	78	%	40-140
OP48454-BS	606-20-2	2,6-Dinitrotoluene	BSP	REC	75	%	40-140
OP48454-BS	91-94-1	3,3'-Dichlorobenzidine	BSP	REC	31	%	40-140
OP48454-BS	53-70-3	Dibenzo(a,h)anthracene	BSP	REC	73	%	40-140
OP48454-BS	132-64-9	Dibenzofuran	BSP	REC	70	%	40-140
OP48454-BS	84-74-2	Di-n-butyl phthalate	BSP	REC	79	%	40-140
OP48454-BS	117-84-0	Di-n-octyl phthalate	BSP	REC	70	%	40-140
OP48454-BS	84-66-2	Diethyl phthalate	BSP	REC	76	%	40-140
OP48454-BS	131-11-3	Dimethyl phthalate	BSP	REC	76	%	40-140
OP48454-BS	117-81-7	bis(2-Ethylhexyl)phthalate	BSP	REC	74	%	40-140
OP48454-BS	206-44-0	Fluoranthene	BSP	REC	78	%	40-140
OP48454-BS	86-73-7	Fluorene	BSP	REC	76	%	40-140
OP48454-BS	118-74-1	Hexachlorobenzene	BSP	REC	75	%	40-140
OP48454-BS	87-68-3	Hexachlorobutadiene	BSP	REC	60	%	40-140
OP48454-BS	77-47-4	Hexachlorocyclopentadiene	BSP	REC	46	%	40-140
OP48454-BS	67-72-1	Hexachloroethane	BSP	REC	51	%	40-140
OP48454-BS	193-39-5	Indeno(1,2,3-cd)pyrene	BSP	REC	69	%	40-140
OP48454-BS	78-59-1	Isophorone	BSP	REC	64	%	40-140
OP48454-BS	91-57-6	2-Methylnaphthalene	BSP	REC	66	%	40-140
OP48454-BS	91-20-3	Naphthalene	BSP	REC	62	%	40-140
OP48454-BS	98-95-3	Nitrobenzene	BSP	REC	65	%	40-140
OP48454-BS	621-64-7	N-Nitroso-di-n-propylamine	BSP	REC	68	%	40-140
OP48454-BS	86-30-6	N-Nitrosodiphenylamine	BSP	REC	70	%	40-140
OP48454-BS	85-01-8	Phenanthrene	BSP	REC	76	%	40-140
OP48454-BS	129-00-0	Pyrene	BSP	REC	77	%	40-140
OP48454-BS	120-82-1	1,2,4-Trichlorobenzene	BSP	REC	61	%	40-140
OP48454-BS	367-12-4	2-Fluorophenol	BSP	SURR	66	%	30-130
OP48454-BS	4165-62-2	Phenol-d5	BSP	SURR	69	%	30-130
OP48454-BS	118-79-6	2,4,6-Tribromophenol	BSP	SURR	88	%	30-130
OP48454-BS	4165-60-0	Nitrobenzene-d5	BSP	SURR	62	%	30-130
OP48454-BS	321-60-8	2-Fluorobiphenyl	BSP	SURR	73	%	30-130
OP48454-BS	1718-51-0	Terphenyl-d14	BSP	SURR	84	%	30-130
OP48454-BSD	65-85-0	Benzoic acid	BSD	REC	88	%	30-130
OP48454-BSD	65-85-0	Benzoic acid	BSD	RPD	10	%	30
OP48454-BSD	95-57-8	2-Chlorophenol	BSD	REC	61	%	30-130
OP48454-BSD	95-57-8	2-Chlorophenol	BSD	RPD	15	%	30
OP48454-BSD	59-50-7	4-Chloro-3-methyl phenol	BSD	REC	68	%	30-130
OP48454-BSD	59-50-7	4-Chloro-3-methyl phenol	BSD	RPD	22	%	30
OP48454-BSD	120-83-2	2,4-Dichlorophenol	BSD	REC	68	%	30-130
OP48454-BSD	120-83-2	2,4-Dichlorophenol	BSD	RPD	19	%	30
OP48454-BSD	105-67-9	2,4-Dimethylphenol	BSD	REC	64	%	30-130
OP48454-BSD	105-67-9	2,4-Dimethylphenol	BSD	RPD	19	%	30
OP48454-BSD	51-28-5	2,4-Dinitrophenol	BSD	REC	80	%	30-130
OP48454-BSD	51-28-5	2,4-Dinitrophenol	BSD	RPD	10	%	30
OP48454-BSD	95-48-7	2-Methylphenol	BSD	REC	61	%	30-130

5.6

* Sample used for QC is not from job MC47325

QC Evaluation: MA MCP Limits

Job Number: MC47325
Account: EnviroTrac
Project: Maggiore Somerville, 343 - 351 Summer Street, Somerville, MA
Collected: 08/12/16

QC Sample ID	CAS#	Analyte	Sample Type	Result Type	Result	Units	Limits
OP48454-BSD	95-48-7	2-Methylphenol	BSD	RPD	16	%	30
OP48454-BSD		3&4-Methylphenol	BSD	REC	62	%	30-130
OP48454-BSD		3&4-Methylphenol	BSD	RPD	18	%	30
OP48454-BSD	88-75-5	2-Nitrophenol	BSD	REC	66	%	30-130
OP48454-BSD	88-75-5	2-Nitrophenol	BSD	RPD	6	%	30
OP48454-BSD	100-02-7	4-Nitrophenol	BSD	REC	66	%	30-130
OP48454-BSD	100-02-7	4-Nitrophenol	BSD	RPD	18	%	30
OP48454-BSD	87-86-5	Pentachlorophenol	BSD	REC	78	%	30-130
OP48454-BSD	87-86-5	Pentachlorophenol	BSD	RPD	16	%	30
OP48454-BSD	108-95-2	Phenol	BSD	REC	62	%	30-130
OP48454-BSD	108-95-2	Phenol	BSD	RPD	18	%	30
OP48454-BSD	95-95-4	2,4,5-Trichlorophenol	BSD	REC	70	%	30-130
OP48454-BSD	95-95-4	2,4,5-Trichlorophenol	BSD	RPD	22	%	30
OP48454-BSD	88-06-2	2,4,6-Trichlorophenol	BSD	REC	72	%	30-130
OP48454-BSD	88-06-2	2,4,6-Trichlorophenol	BSD	RPD	20	%	30
OP48454-BSD	83-32-9	Acenaphthene	BSD	REC	61	%	40-140
OP48454-BSD	83-32-9	Acenaphthene	BSD	RPD	19	%	30
OP48454-BSD	208-96-8	Acenaphthylene	BSD	REC	47	%	40-140
OP48454-BSD	208-96-8	Acenaphthylene	BSD	RPD	20	%	30
OP48454-BSD	98-86-2	Acetophenone	BSD	REC	51	%	40-140
OP48454-BSD	98-86-2	Acetophenone	BSD	RPD	15	%	30
OP48454-BSD	62-53-3	Aniline	BSD	REC	38	%	40-140
OP48454-BSD	62-53-3	Aniline	BSD	RPD	25	%	30
OP48454-BSD	120-12-7	Anthracene	BSD	REC	59	%	40-140
OP48454-BSD	120-12-7	Anthracene	BSD	RPD	21	%	30
OP48454-BSD	56-55-3	Benzo(a)anthracene	BSD	REC	62	%	40-140
OP48454-BSD	56-55-3	Benzo(a)anthracene	BSD	RPD	20	%	30
OP48454-BSD	50-32-8	Benzo(a)pyrene	BSD	REC	57	%	40-140
OP48454-BSD	50-32-8	Benzo(a)pyrene	BSD	RPD	21	%	30
OP48454-BSD	205-99-2	Benzo(b)fluoranthene	BSD	REC	57	%	40-140
OP48454-BSD	205-99-2	Benzo(b)fluoranthene	BSD	RPD	24	%	30
OP48454-BSD	191-24-2	Benzo(g,h,i)perylene	BSD	REC	61	%	40-140
OP48454-BSD	191-24-2	Benzo(g,h,i)perylene	BSD	RPD	22	%	30
OP48454-BSD	207-08-9	Benzo(k)fluoranthene	BSD	REC	59	%	40-140
OP48454-BSD	207-08-9	Benzo(k)fluoranthene	BSD	RPD	19	%	30
OP48454-BSD	101-55-3	4-Bromophenyl phenyl ether	BSD	REC	61	%	40-140
OP48454-BSD	101-55-3	4-Bromophenyl phenyl ether	BSD	RPD	23	%	30
OP48454-BSD	85-68-7	Butyl benzyl phthalate	BSD	REC	66	%	40-140
OP48454-BSD	85-68-7	Butyl benzyl phthalate	BSD	RPD	21	%	30
OP48454-BSD	91-58-7	2-Chloronaphthalene	BSD	REC	59	%	40-140
OP48454-BSD	91-58-7	2-Chloronaphthalene	BSD	RPD	18	%	30
OP48454-BSD	106-47-8	4-Chloroaniline	BSD	REC	30	%	40-140
OP48454-BSD	106-47-8	4-Chloroaniline	BSD	RPD	36 [b]	%	30
OP48454-BSD	218-01-9	Chrysene	BSD	REC	61	%	40-140
OP48454-BSD	218-01-9	Chrysene	BSD	RPD	20	%	30

* Sample used for QC is not from job MC47325

QC Evaluation: MA MCP Limits

Job Number: MC47325
Account: EnviroTrac
Project: Maggiore Somerville, 343 - 351 Summer Street, Somerville, MA
Collected: 08/12/16

QC Sample ID	CAS#	Analyte	Sample Type	Result Type	Result	Units	Limits
OP48454-BSD	111-91-1	bis(2-Chloroethoxy)methane	BSD	REC	54	%	40-140
OP48454-BSD	111-91-1	bis(2-Chloroethoxy)methane	BSD	RPD	19	%	30
OP48454-BSD	111-44-4	bis(2-Chloroethyl)ether	BSD	REC	49	%	40-140
OP48454-BSD	111-44-4	bis(2-Chloroethyl)ether	BSD	RPD	13	%	30
OP48454-BSD	108-60-1	bis(2-Chloroisopropyl)ether	BSD	REC	54	%	40-140
OP48454-BSD	108-60-1	bis(2-Chloroisopropyl)ether	BSD	RPD	15	%	30
OP48454-BSD	95-50-1	1,2-Dichlorobenzene	BSD	REC	51	%	40-140
OP48454-BSD	95-50-1	1,2-Dichlorobenzene	BSD	RPD	4	%	30
OP48454-BSD	122-66-7	1,2-Diphenylhydrazine	BSD	REC	60	%	40-140
OP48454-BSD	122-66-7	1,2-Diphenylhydrazine	BSD	RPD	22	%	30
OP48454-BSD	541-73-1	1,3-Dichlorobenzene	BSD	REC	51	%	40-140
OP48454-BSD	541-73-1	1,3-Dichlorobenzene	BSD	RPD	2	%	30
OP48454-BSD	106-46-7	1,4-Dichlorobenzene	BSD	REC	50	%	40-140
OP48454-BSD	106-46-7	1,4-Dichlorobenzene	BSD	RPD	1	%	30
OP48454-BSD	121-14-2	2,4-Dinitrotoluene	BSD	REC	68	%	40-140
OP48454-BSD	121-14-2	2,4-Dinitrotoluene	BSD	RPD	14	%	30
OP48454-BSD	606-20-2	2,6-Dinitrotoluene	BSD	REC	65	%	40-140
OP48454-BSD	606-20-2	2,6-Dinitrotoluene	BSD	RPD	16	%	30
OP48454-BSD	91-94-1	3,3'-Dichlorobenzidine	BSD	REC	36	%	40-140
OP48454-BSD	91-94-1	3,3'-Dichlorobenzidine	BSD	RPD	14	%	30
OP48454-BSD	53-70-3	Dibenzo(a,h)anthracene	BSD	REC	59	%	40-140
OP48454-BSD	53-70-3	Dibenzo(a,h)anthracene	BSD	RPD	22	%	30
OP48454-BSD	132-64-9	Dibenzofuran	BSD	REC	58	%	40-140
OP48454-BSD	132-64-9	Dibenzofuran	BSD	RPD	21	%	30
OP48454-BSD	84-74-2	Di-n-butyl phthalate	BSD	REC	64	%	40-140
OP48454-BSD	84-74-2	Di-n-butyl phthalate	BSD	RPD	22	%	30
OP48454-BSD	117-84-0	Di-n-octyl phthalate	BSD	REC	59	%	40-140
OP48454-BSD	117-84-0	Di-n-octyl phthalate	BSD	RPD	19	%	30
OP48454-BSD	84-66-2	Diethyl phthalate	BSD	REC	61	%	40-140
OP48454-BSD	84-66-2	Diethyl phthalate	BSD	RPD	23	%	30
OP48454-BSD	131-11-3	Dimethyl phthalate	BSD	REC	61	%	40-140
OP48454-BSD	131-11-3	Dimethyl phthalate	BSD	RPD	22	%	30
OP48454-BSD	117-81-7	bis(2-Ethylhexyl)phthalate	BSD	REC	61	%	40-140
OP48454-BSD	117-81-7	bis(2-Ethylhexyl)phthalate	BSD	RPD	20	%	30
OP48454-BSD	206-44-0	Fluoranthene	BSD	REC	63	%	40-140
OP48454-BSD	206-44-0	Fluoranthene	BSD	RPD	22	%	30
OP48454-BSD	86-73-7	Fluorene	BSD	REC	61	%	40-140
OP48454-BSD	86-73-7	Fluorene	BSD	RPD	22	%	30
OP48454-BSD	118-74-1	Hexachlorobenzene	BSD	REC	61	%	40-140
OP48454-BSD	118-74-1	Hexachlorobenzene	BSD	RPD	22	%	30
OP48454-BSD	87-68-3	Hexachlorobutadiene	BSD	REC	54	%	40-140
OP48454-BSD	87-68-3	Hexachlorobutadiene	BSD	RPD	11	%	30
OP48454-BSD	77-47-4	Hexachlorocyclopentadiene	BSD	REC	40	%	40-140
OP48454-BSD	77-47-4	Hexachlorocyclopentadiene	BSD	RPD	14	%	30
OP48454-BSD	67-72-1	Hexachloroethane	BSD	REC	52	%	40-140

* Sample used for QC is not from job MC47325

QC Evaluation: MA MCP Limits

Job Number: MC47325
Account: EnviroTrac
Project: Maggiore Somerville, 343 - 351 Summer Street, Somerville, MA
Collected: 08/12/16

QC Sample ID	CAS#	Analyte	Sample Type	Result Type	Result	Units	Limits
OP48454-BSD	67-72-1	Hexachloroethane	BSD	RPD	0	%	30
OP48454-BSD	193-39-5	Indeno(1,2,3-cd)pyrene	BSD	REC	57	%	40-140
OP48454-BSD	193-39-5	Indeno(1,2,3-cd)pyrene	BSD	RPD	19	%	30
OP48454-BSD	78-59-1	Isophorone	BSD	REC	54	%	40-140
OP48454-BSD	78-59-1	Isophorone	BSD	RPD	17	%	30
OP48454-BSD	91-57-6	2-Methylnaphthalene	BSD	REC	57	%	40-140
OP48454-BSD	91-57-6	2-Methylnaphthalene	BSD	RPD	17	%	30
OP48454-BSD	91-20-3	Naphthalene	BSD	REC	54	%	40-140
OP48454-BSD	91-20-3	Naphthalene	BSD	RPD	14	%	30
OP48454-BSD	98-95-3	Nitrobenzene	BSD	REC	58	%	40-140
OP48454-BSD	98-95-3	Nitrobenzene	BSD	RPD	12	%	30
OP48454-BSD	621-64-7	N-Nitroso-di-n-propylamine	BSD	REC	57	%	40-140
OP48454-BSD	621-64-7	N-Nitroso-di-n-propylamine	BSD	RPD	19	%	30
OP48454-BSD	86-30-6	N-Nitrosodiphenylamine	BSD	REC	57	%	40-140
OP48454-BSD	86-30-6	N-Nitrosodiphenylamine	BSD	RPD	21	%	30
OP48454-BSD	85-01-8	Phenanthrene	BSD	REC	61	%	40-140
OP48454-BSD	85-01-8	Phenanthrene	BSD	RPD	23	%	30
OP48454-BSD	129-00-0	Pyrene	BSD	REC	64	%	40-140
OP48454-BSD	129-00-0	Pyrene	BSD	RPD	20	%	30
OP48454-BSD	120-82-1	1,2,4-Trichlorobenzene	BSD	REC	54	%	40-140
OP48454-BSD	120-82-1	1,2,4-Trichlorobenzene	BSD	RPD	14	%	30
OP48454-BSD	367-12-4	2-Fluorophenol	BSD	SURR	58	%	30-130
OP48454-BSD	4165-62-2	Phenol-d5	BSD	SURR	58	%	30-130
OP48454-BSD	118-79-6	2,4,6-Tribromophenol	BSD	SURR	76	%	30-130
OP48454-BSD	4165-60-0	Nitrobenzene-d5	BSD	SURR	58	%	30-130
OP48454-BSD	321-60-8	2-Fluorobiphenyl	BSD	SURR	61	%	30-130
OP48454-BSD	1718-51-0	Terphenyl-d14	BSD	SURR	69	%	30-130
OP48454-MB	367-12-4	2-Fluorophenol	MB	SURR	55	%	30-130
OP48454-MB	4165-62-2	Phenol-d5	MB	SURR	57	%	30-130
OP48454-MB	118-79-6	2,4,6-Tribromophenol	MB	SURR	63	%	30-130
OP48454-MB	4165-60-0	Nitrobenzene-d5	MB	SURR	52	%	30-130
OP48454-MB	321-60-8	2-Fluorobiphenyl	MB	SURR	58	%	30-130
OP48454-MB	1718-51-0	Terphenyl-d14	MB	SURR	66	%	30-130
MC47325-9	367-12-4	2-Fluorophenol	SAMP	SURR	62	%	30-130
MC47325-9	4165-62-2	Phenol-d5	SAMP	SURR	79	%	30-130
MC47325-9	118-79-6	2,4,6-Tribromophenol	SAMP	SURR	163 [c]	%	30-130
MC47325-9	4165-60-0	Nitrobenzene-d5	SAMP	SURR	0 [c]	%	30-130
MC47325-9	321-60-8	2-Fluorobiphenyl	SAMP	SURR	82	%	30-130
MC47325-9	1718-51-0	Terphenyl-d14	SAMP	SURR	83	%	30-130
OP48455	SW846 8082A						
OP48455-BS	12674-11-2	Aroclor 1016	BSP	REC	85	%	40-140
OP48455-BS	11096-82-5	Aroclor 1260	BSP	REC	89	%	40-140
OP48455-BS	877-09-8	Tetrachloro-m-xylene (sig#1)	BSP	SURR	78	%	30-150

* Sample used for QC is not from job MC47325

QC Evaluation: MA MCP Limits

Job Number: MC47325
Account: EnviroTrac
Project: Maggiore Somerville, 343 - 351 Summer Street, Somerville, MA
Collected: 08/12/16

QC Sample ID	CAS#	Analyte	Sample Type	Result Type	Result	Units	Limits
OP48455-BS	877-09-8	Tetrachloro-m-xylene (sig#2)	BSP	SURR	81	%	30-150
OP48455-BS	2051-24-3	Decachlorobiphenyl (sig#1)	BSP	SURR	97	%	30-150
OP48455-BS	2051-24-3	Decachlorobiphenyl (sig#2)	BSP	SURR	99	%	30-150
OP48455-BSD	12674-11-2	Aroclor 1016	BSD	REC	81	%	40-140
OP48455-BSD	12674-11-2	Aroclor 1016	BSD	RPD	10	%	30
OP48455-BSD	11104-28-2	Aroclor 1221	BSD	RPD	0	%	30
OP48455-BSD	11141-16-5	Aroclor 1232	BSD	RPD	0	%	30
OP48455-BSD	53469-21-9	Aroclor 1242	BSD	RPD	0	%	30
OP48455-BSD	12672-29-6	Aroclor 1248	BSD	RPD	0	%	30
OP48455-BSD	11097-69-1	Aroclor 1254	BSD	RPD	0	%	30
OP48455-BSD	11096-82-5	Aroclor 1260	BSD	REC	83	%	40-140
OP48455-BSD	11096-82-5	Aroclor 1260	BSD	RPD	12	%	30
OP48455-BSD	37324-23-5	Aroclor 1262	BSD	RPD	0	%	30
OP48455-BSD	11100-14-4	Aroclor 1268	BSD	RPD	0	%	30
OP48455-BSD	877-09-8	Tetrachloro-m-xylene (sig#1)	BSD	SURR	72	%	30-150
OP48455-BSD	877-09-8	Tetrachloro-m-xylene (sig#2)	BSD	SURR	82	%	30-150
OP48455-BSD	2051-24-3	Decachlorobiphenyl (sig#1)	BSD	SURR	91	%	30-150
OP48455-BSD	2051-24-3	Decachlorobiphenyl (sig#2)	BSD	SURR	98	%	30-150
OP48455-MB	877-09-8	Tetrachloro-m-xylene (sig#1)	MB	SURR	73	%	30-150
OP48455-MB	877-09-8	Tetrachloro-m-xylene (sig#2)	MB	SURR	73	%	30-150
OP48455-MB	2051-24-3	Decachlorobiphenyl (sig#1)	MB	SURR	91	%	30-150
OP48455-MB	2051-24-3	Decachlorobiphenyl (sig#2)	MB	SURR	90	%	30-150
MC47325-9	877-09-8	Tetrachloro-m-xylene (sig#1)	SAMP	SURR	67	%	30-150
MC47325-9	877-09-8	Tetrachloro-m-xylene (sig#2)	SAMP	SURR	53	%	30-150
MC47325-9	2051-24-3	Decachlorobiphenyl (sig#1)	SAMP	SURR	58	%	30-150
MC47325-9	2051-24-3	Decachlorobiphenyl (sig#2)	SAMP	SURR	46	%	30-150

(a) Outside control limits. Associated samples are non-detect for this compound.
(b) Outside control limits. Individual spike recoveries within in-house acceptance limits.
(c) Outside control limits due to matrix interference compounded by dilution.

* Sample used for QC is not from job MC47325

GC/MS Volatiles

QC Data Summaries

Includes the following where applicable:

- Method Blank Summaries
- Blank Spike Summaries
- Matrix Spike and Duplicate Summaries
- Internal Standard Area Summaries
- Surrogate Recovery Summaries

Method Blank Summary

Job Number: MC47325
Account: ENVTRAC EnviroTrac
Project: Maggiore Somerville, 343 - 351 Summer Street, Somerville, MA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MSL4331-MB	L99670.D	1	08/18/16	TB	n/a	n/a	MSL4331

The QC reported here applies to the following samples: **Method:** SW846 8260C

MC47325-9

CAS No.	Compound	Result	RL	Units	Q
67-64-1	Acetone	ND	500	ug/kg	
71-43-2	Benzene	ND	25	ug/kg	
108-86-1	Bromobenzene	ND	250	ug/kg	
74-97-5	Bromochloromethane	ND	250	ug/kg	
75-27-4	Bromodichloromethane	ND	100	ug/kg	
75-25-2	Bromoform	ND	100	ug/kg	
74-83-9	Bromomethane	ND	100	ug/kg	
78-93-3	2-Butanone (MEK)	ND	500	ug/kg	
104-51-8	n-Butylbenzene	ND	250	ug/kg	
135-98-8	sec-Butylbenzene	ND	250	ug/kg	
98-06-6	tert-Butylbenzene	ND	250	ug/kg	
75-15-0	Carbon disulfide	ND	250	ug/kg	
56-23-5	Carbon tetrachloride	ND	100	ug/kg	
108-90-7	Chlorobenzene	ND	100	ug/kg	
75-00-3	Chloroethane	ND	250	ug/kg	
67-66-3	Chloroform	ND	100	ug/kg	
74-87-3	Chloromethane	ND	250	ug/kg	
95-49-8	o-Chlorotoluene	ND	250	ug/kg	
106-43-4	p-Chlorotoluene	ND	250	ug/kg	
108-20-3	Di-Isopropyl ether	ND	100	ug/kg	
96-12-8	1,2-Dibromo-3-chloropropane	ND	250	ug/kg	
124-48-1	Dibromochloromethane	ND	100	ug/kg	
106-93-4	1,2-Dibromoethane	ND	100	ug/kg	
95-50-1	1,2-Dichlorobenzene	ND	100	ug/kg	
541-73-1	1,3-Dichlorobenzene	ND	100	ug/kg	
106-46-7	1,4-Dichlorobenzene	ND	100	ug/kg	
75-71-8	Dichlorodifluoromethane	ND	100	ug/kg	
75-34-3	1,1-Dichloroethane	ND	100	ug/kg	
107-06-2	1,2-Dichloroethane	ND	100	ug/kg	
75-35-4	1,1-Dichloroethene	ND	100	ug/kg	
156-59-2	cis-1,2-Dichloroethene	ND	100	ug/kg	
156-60-5	trans-1,2-Dichloroethene	ND	100	ug/kg	
78-87-5	1,2-Dichloropropane	ND	100	ug/kg	
142-28-9	1,3-Dichloropropane	ND	250	ug/kg	
594-20-7	2,2-Dichloropropane	ND	250	ug/kg	
563-58-6	1,1-Dichloropropene	ND	250	ug/kg	

Method Blank Summary

Job Number: MC47325
Account: ENVTRAC EnviroTrac
Project: Maggiore Somerville, 343 - 351 Summer Street, Somerville, MA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MSL4331-MB	L99670.D	1	08/18/16	TB	n/a	n/a	MSL4331

The QC reported here applies to the following samples: **Method:** SW846 8260C

MC47325-9

CAS No.	Compound	Result	RL	Units	Q
10061-01-5	cis-1,3-Dichloropropene	ND	100	ug/kg	
10061-02-6	trans-1,3-Dichloropropene	ND	100	ug/kg	
123-91-1	1,4-Dioxane	ND	6300	ug/kg	
60-29-7	Ethyl Ether	ND	250	ug/kg	
100-41-4	Ethylbenzene	ND	100	ug/kg	
87-68-3	Hexachlorobutadiene	ND	250	ug/kg	
591-78-6	2-Hexanone	ND	500	ug/kg	
98-82-8	Isopropylbenzene	ND	250	ug/kg	
99-87-6	p-Isopropyltoluene	ND	250	ug/kg	
1634-04-4	Methyl Tert Butyl Ether	ND	100	ug/kg	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	250	ug/kg	
74-95-3	Methylene bromide	ND	250	ug/kg	
75-09-2	Methylene chloride	ND	100	ug/kg	
91-20-3	Naphthalene	ND	250	ug/kg	
103-65-1	n-Propylbenzene	ND	250	ug/kg	
100-42-5	Styrene	ND	250	ug/kg	
994-05-8	tert-Amyl Methyl Ether	ND	250	ug/kg	
637-92-3	tert-Butyl Ethyl Ether	ND	100	ug/kg	
630-20-6	1,1,1,2-Tetrachloroethane	ND	250	ug/kg	
79-34-5	1,1,2,2-Tetrachloroethane	ND	100	ug/kg	
127-18-4	Tetrachloroethene	ND	100	ug/kg	
109-99-9	Tetrahydrofuran	ND	500	ug/kg	
108-88-3	Toluene	ND	250	ug/kg	
87-61-6	1,2,3-Trichlorobenzene	ND	250	ug/kg	
120-82-1	1,2,4-Trichlorobenzene	ND	250	ug/kg	
71-55-6	1,1,1-Trichloroethane	ND	100	ug/kg	
79-00-5	1,1,2-Trichloroethane	ND	100	ug/kg	
79-01-6	Trichloroethene	ND	100	ug/kg	
75-69-4	Trichlorofluoromethane	ND	100	ug/kg	
96-18-4	1,2,3-Trichloropropane	ND	250	ug/kg	
95-63-6	1,2,4-Trimethylbenzene	ND	250	ug/kg	
108-67-8	1,3,5-Trimethylbenzene	ND	250	ug/kg	
75-01-4	Vinyl chloride	ND	100	ug/kg	
	m,p-Xylene	ND	100	ug/kg	
95-47-6	o-Xylene	ND	100	ug/kg	
1330-20-7	Xylene (total)	ND	100	ug/kg	

Method Blank Summary

Job Number: MC47325
Account: ENVTRAC EnviroTrac
Project: Maggiore Somerville, 343 - 351 Summer Street, Somerville, MA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MSL4331-MB	L99670.D	1	08/18/16	TB	n/a	n/a	MSL4331

The QC reported here applies to the following samples: **Method:** SW846 8260C

MC47325-9

CAS No.	Surrogate Recoveries		Limits
1868-53-7	Dibromofluoromethane	119%	65-141%
2037-26-5	Toluene-D8	98%	65-129%
460-00-4	4-Bromofluorobenzene	108%	63-137%

Blank Spike/Blank Spike Duplicate Summary

Job Number: MC47325
Account: ENVTRAC EnviroTrac
Project: Maggiore Somerville, 343 - 351 Summer Street, Somerville, MA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MSL4331-BS	L99666.D	1	08/18/16	TB	n/a	n/a	MSL4331
MSL4331-BSD	L99667.D	1	08/18/16	TB	n/a	n/a	MSL4331

The QC reported here applies to the following samples: **Method:** SW846 8260C

MC47325-9

CAS No.	Compound	Spike ug/kg	BSP ug/kg	BSP %	BSD ug/kg	BSD %	RPD	Limits Rec/RPD
67-64-1	Acetone	2500	3150	126	3030	121	4	24-179/25
71-43-2	Benzene	2500	2490	100	2420	97	3	73-115/25
108-86-1	Bromobenzene	2500	2360	94	2310	92	2	76-121/25
74-97-5	Bromochloromethane	2500	2500	100	2410	96	4	76-129/25
75-27-4	Bromodichloromethane	2500	2420	97	2400	96	1	76-122/25
75-25-2	Bromoform	2500	2410	96	2400	96	0	67-151/25
74-83-9	Bromomethane	2500	4820	193* [a]	4750	190* [a]	1	52-139/25
78-93-3	2-Butanone (MEK)	2500	4830	193* [a]	4550	182* [a]	6	32-151/25
104-51-8	n-Butylbenzene	2500	2760	110	2690	108	3	71-124/25
135-98-8	sec-Butylbenzene	2500	2400	96	2340	94	3	71-124/25
98-06-6	tert-Butylbenzene	2500	2370	95	2330	93	2	66-125/25
75-15-0	Carbon disulfide	2500	2550	102	2400	96	6	57-143/25
56-23-5	Carbon tetrachloride	2500	2630	105	2520	101	4	73-129/25
108-90-7	Chlorobenzene	2500	2310	92	2300	92	0	79-123/25
75-00-3	Chloroethane	2500	2970	119	2810	112	6	51-159/25
67-66-3	Chloroform	2500	2560	102	2460	98	4	72-122/25
74-87-3	Chloromethane	2500	3020	121	2890	116	4	57-143/25
95-49-8	o-Chlorotoluene	2500	2540	102	2480	99	2	68-121/25
106-43-4	p-Chlorotoluene	2500	2510	100	2450	98	2	68-119/25
108-20-3	Di-Isopropyl ether	2500	2910	116	2840	114	2	63-142/25
96-12-8	1,2-Dibromo-3-chloropropane	2500	2340	94	2310	92	1	52-132/25
124-48-1	Dibromochloromethane	2500	2300	92	2310	92	0	74-139/25
106-93-4	1,2-Dibromoethane	2500	2340	94	2350	94	0	76-130/25
95-50-1	1,2-Dichlorobenzene	2500	2430	97	2390	96	2	73-122/25
541-73-1	1,3-Dichlorobenzene	2500	2390	96	2380	95	0	74-119/25
106-46-7	1,4-Dichlorobenzene	2500	2360	94	2340	94	1	75-118/25
75-71-8	Dichlorodifluoromethane	2500	1660	66	1560	62	6	11-183/25
75-34-3	1,1-Dichloroethane	2500	2530	101	2420	97	4	70-128/25
107-06-2	1,2-Dichloroethane	2500	2590	104	2510	100	3	70-126/25
75-35-4	1,1-Dichloroethene	2500	2660	106	2530	101	5	71-136/25
156-59-2	cis-1,2-Dichloroethene	2500	2800	112	2670	107	5	78-128/25
156-60-5	trans-1,2-Dichloroethene	2500	2370	95	2240	90	6	71-131/25
78-87-5	1,2-Dichloropropane	2500	2460	98	2400	96	2	79-124/25
142-28-9	1,3-Dichloropropane	2500	2460	98	2440	98	1	78-128/25
594-20-7	2,2-Dichloropropane	2500	2970	119	2790	112	6	54-145/25
563-58-6	1,1-Dichloropropene	2500	2660	106	2550	102	4	67-125/25

* = Outside of Control Limits.

Blank Spike/Blank Spike Duplicate Summary

Job Number: MC47325
Account: ENVTRAC EnviroTrac
Project: Maggiore Somerville, 343 - 351 Summer Street, Somerville, MA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MSL4331-BS	L99666.D	1	08/18/16	TB	n/a	n/a	MSL4331
MSL4331-BSD	L99667.D	1	08/18/16	TB	n/a	n/a	MSL4331

The QC reported here applies to the following samples: **Method:** SW846 8260C

MC47325-9

CAS No.	Compound	Spike ug/kg	BSP ug/kg	BSP %	BSD ug/kg	BSD %	RPD	Limits Rec/RPD
10061-01-5	cis-1,3-Dichloropropene	2500	2330	93	2300	92	1	75-126/25
10061-02-6	trans-1,3-Dichloropropene	2500	2350	94	2300	92	2	75-128/25
123-91-1	1,4-Dioxane	12500	8720	70	8390	67	4	48-156/25
60-29-7	Ethyl Ether	2500	2550	102	2520	101	1	68-141/25
100-41-4	Ethylbenzene	2500	2370	95	2340	94	1	76-122/25
87-68-3	Hexachlorobutadiene	2500	2220	89	2160	86	3	73-137/25
591-78-6	2-Hexanone	2500	3180	127	3090	124	3	26-169/25
98-82-8	Isopropylbenzene	2500	2310	92	2250	90	3	69-124/25
99-87-6	p-Isopropyltoluene	2500	2460	98	2390	96	3	73-124/25
1634-04-4	Methyl Tert Butyl Ether	2500	2840	114	2770	111	2	58-133/25
108-10-1	4-Methyl-2-pentanone (MIBK)	2500	2700	108	2600	104	4	43-166/25
74-95-3	Methylene bromide	2500	2350	94	2290	92	3	76-125/25
75-09-2	Methylene chloride	2500	2500	100	2400	96	4	74-125/25
91-20-3	Naphthalene	2500	2120	85	2040	82	4	39-158/25
103-65-1	n-Propylbenzene	2500	2500	100	2420	97	3	69-121/25
100-42-5	Styrene	2500	2350	94	2310	92	2	79-124/25
994-05-8	tert-Amyl Methyl Ether	2500	2810	112	2750	110	2	32-153/25
637-92-3	tert-Butyl Ethyl Ether	2500	2450	98	2390	96	2	41-147/25
630-20-6	1,1,1,2-Tetrachloroethane	2500	2370	95	2350	94	1	75-136/25
79-34-5	1,1,2,2-Tetrachloroethane	2500	2400	96	2350	94	2	66-134/25
127-18-4	Tetrachloroethene	2500	2310	92	2310	92	0	76-125/25
109-99-9	Tetrahydrofuran	2500	2550	102	2540	102	0	34-177/25
108-88-3	Toluene	2500	2480	99	2400	96	3	76-119/25
87-61-6	1,2,3-Trichlorobenzene	2500	2160	86	2080	83	4	52-146/25
120-82-1	1,2,4-Trichlorobenzene	2500	2280	91	2210	88	3	66-133/25
71-55-6	1,1,1-Trichloroethane	2500	2610	104	2490	100	5	70-130/25
79-00-5	1,1,2-Trichloroethane	2500	2350	94	2290	92	3	75-124/25
79-01-6	Trichloroethene	2500	2380	95	2320	93	3	74-127/25
75-69-4	Trichlorofluoromethane	2500	2310	92	2180	87	6	48-156/25
96-18-4	1,2,3-Trichloropropane	2500	2320	93	2290	92	1	65-130/25
95-63-6	1,2,4-Trimethylbenzene	2500	2530	101	2470	99	2	69-119/25
108-67-8	1,3,5-Trimethylbenzene	2500	2670	107	2600	104	3	69-123/25
75-01-4	Vinyl chloride	2500	2380	95	2230	89	7	33-166/25
	m,p-Xylene	5000	4680	94	4610	92	2	78-122/25
95-47-6	o-Xylene	2500	2300	92	2320	93	1	77-123/25
1330-20-7	Xylene (total)	7500	6980	93	6930	92	1	78-122/25

* = Outside of Control Limits.

Blank Spike/Blank Spike Duplicate Summary

Job Number: MC47325
Account: ENVTRAC EnviroTrac
Project: Maggiore Somerville, 343 - 351 Summer Street, Somerville, MA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MSL4331-BS	L99666.D	1	08/18/16	TB	n/a	n/a	MSL4331
MSL4331-BSD	L99667.D	1	08/18/16	TB	n/a	n/a	MSL4331

The QC reported here applies to the following samples: **Method:** SW846 8260C

MC47325-9

CAS No.	Surrogate Recoveries	BSP	BSD	Limits
1868-53-7	Dibromofluoromethane	104%	102%	65-141%
2037-26-5	Toluene-D8	97%	96%	65-129%
460-00-4	4-Bromofluorobenzene	96%	97%	63-137%

(a) Outside control limits. Associated samples are non-detect for this compound.

* = Outside of Control Limits.

Volatile Internal Standard Area Summary

Job Number: MC47325
Account: ENVTRAC EnviroTrac
Project: Maggiore Somerville, 343 - 351 Summer Street, Somerville, MA

Check Std: MSL4331-CC4322 **Injection Date:** 08/18/16
Lab File ID: L99665.D **Injection Time:** 12:02
Instrument ID: GCMSL **Method:** SW846 8260C

	IS 1 AREA	RT	IS 2 AREA	RT	IS 3 AREA	RT	IS 4 AREA	RT	IS 5 AREA	RT
Check Std	153943	9.57	234118	10.46	134102	13.66	141349	16.23	44403	7.54
Upper Limit [a]	307886	10.07	468236	10.96	268204	14.16	282698	16.73	88806	8.04
Lower Limit [b]	76972	9.07	117059	9.96	67051	13.16	70675	15.73	22202	7.04
Lab Sample ID	**IS 1 AREA**	**RT**	**IS 2 AREA**	**RT**	**IS 3 AREA**	**RT**	**IS 4 AREA**	**RT**	**IS 5 AREA**	**RT**
MSL4331-BS	166800	9.57	252918	10.46	141112	13.66	145767	16.23	50692	7.54
MSL4331-BSD	177371	9.57	268867	10.46	145322	13.66	150563	16.23	51455	7.54
MSL4331-MB	123267	9.57	197174	10.46	106615	13.66	90337	16.23	33663	7.53
ZZZZZZ	137971	9.56	210705	10.46	111122	13.66	96880	16.23	49879	7.55
ZZZZZZ	136894	9.57	211746	10.46	113714	13.66	96960	16.23	47911	7.55
MC47312-4	134547	9.57	209321	10.46	111754	13.66	96957	16.23	42351	7.54
ZZZZZZ	122690	9.57	207382	10.46	128111	13.66	113471	16.23	40805	7.53
ZZZZZZ	136071	9.57	224567	10.46	139687	13.66	131057	16.23	45494	7.53
MC47325-9	148427	9.57	242801	10.46	147545	13.66	173734	16.23	52949	7.53
ZZZZZZ	221907	9.56	338250	10.45	176907	13.66	171666	16.23	84652	7.55
ZZZZZZ	219571	9.56	323503	10.45	172828	13.66	162299	16.23	91085[c]	7.55
MC47312-4MS	230030	9.57	347209	10.46	190779	13.66	192133	16.23	62170	7.54
MC47312-4MSD	223291	9.56	333647	10.45	182788	13.66	190843	16.23	68715	7.54

IS 1 = Pentafluorobenzene
IS 2 = 1,4-Difluorobenzene
IS 3 = Chlorobenzene-D5
IS 4 = 1,4-Dichlorobenzene-d4
IS 5 = Tert Butyl Alcohol-D9

(a) Upper Limit = + 100% of check standard area; Retention time + 0.5 minutes.
(b) Lower Limit = -50% of check standard area; Retention time -0.5 minutes.
(c) Outside control limits. Target analytes not associated with this internal standard.

Volatile Surrogate Recovery Summary

Job Number: MC47325
Account: ENVTRAC EnviroTrac
Project: Maggiore Somerville, 343 - 351 Summer Street, Somerville, MA

Method: SW846 8260C **Matrix:** SO

Samples and QC shown here apply to the above method

Lab Sample ID	Lab File ID	S1	S2	S3
MC47325-9	L99676.D	113	102	96
MSL4331-BS	L99666.D	104	97	96
MSL4331-BSD	L99667.D	102	96	97
MSL4331-MB	L99670.D	119	98	108

Surrogate Compounds	Recovery Limits
S1 = Dibromofluoromethane	65-141%
S2 = Toluene-D8	65-129%
S3 = 4-Bromofluorobenzene	63-137%

GC/MS Semi-volatiles

QC Data Summaries

Includes the following where applicable:

- Method Blank Summaries
- Blank Spike Summaries
- Matrix Spike and Duplicate Summaries
- Internal Standard Area Summaries
- Surrogate Recovery Summaries

Method Blank Summary

Job Number: MC47325
Account: ENVTRAC EnviroTrac
Project: Maggiore Somerville, 343 - 351 Summer Street, Somerville, MA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP48454-MB	W29518.D	1	08/22/16	MR	08/18/16	OP48454	MSW1189

The QC reported here applies to the following samples: **Method:** SW846 8270D

MC47325-9

CAS No.	Compound	Result	RL	Units	Q
65-85-0	Benzoic acid	ND	490	ug/kg	
95-57-8	2-Chlorophenol	ND	250	ug/kg	
59-50-7	4-Chloro-3-methyl phenol	ND	490	ug/kg	
120-83-2	2,4-Dichlorophenol	ND	490	ug/kg	
105-67-9	2,4-Dimethylphenol	ND	490	ug/kg	
51-28-5	2,4-Dinitrophenol	ND	490	ug/kg	
95-48-7	2-Methylphenol	ND	490	ug/kg	
	3&4-Methylphenol	ND	490	ug/kg	
88-75-5	2-Nitrophenol	ND	490	ug/kg	
100-02-7	4-Nitrophenol	ND	490	ug/kg	
87-86-5	Pentachlorophenol	ND	490	ug/kg	
108-95-2	Phenol	ND	250	ug/kg	
95-95-4	2,4,5-Trichlorophenol	ND	490	ug/kg	
88-06-2	2,4,6-Trichlorophenol	ND	490	ug/kg	
83-32-9	Acenaphthene	ND	98	ug/kg	
208-96-8	Acenaphthylene	ND	98	ug/kg	
98-86-2	Acetophenone	ND	490	ug/kg	
62-53-3	Aniline	ND	490	ug/kg	
120-12-7	Anthracene	ND	98	ug/kg	
56-55-3	Benzo(a)anthracene	ND	98	ug/kg	
50-32-8	Benzo(a)pyrene	ND	250	ug/kg	
205-99-2	Benzo(b)fluoranthene	ND	98	ug/kg	
191-24-2	Benzo(g,h,i)perylene	ND	98	ug/kg	
207-08-9	Benzo(k)fluoranthene	ND	98	ug/kg	
101-55-3	4-Bromophenyl phenyl ether	ND	250	ug/kg	
85-68-7	Butyl benzyl phthalate	ND	250	ug/kg	
91-58-7	2-Chloronaphthalene	ND	250	ug/kg	
106-47-8	4-Chloroaniline	ND	490	ug/kg	
218-01-9	Chrysene	ND	98	ug/kg	
111-91-1	bis(2-Chloroethoxy)methane	ND	250	ug/kg	
111-44-4	bis(2-Chloroethyl)ether	ND	250	ug/kg	
108-60-1	bis(2-Chloroisopropyl)ether	ND	250	ug/kg	
95-50-1	1,2-Dichlorobenzene	ND	250	ug/kg	
122-66-7	1,2-Diphenylhydrazine	ND	250	ug/kg	
541-73-1	1,3-Dichlorobenzene	ND	250	ug/kg	
106-46-7	1,4-Dichlorobenzene	ND	250	ug/kg	

7.1.1

Method Blank Summary

Job Number: MC47325
Account: ENVTRAC EnviroTrac
Project: Maggiore Somerville, 343 - 351 Summer Street, Somerville, MA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP48454-MB	W29518.D	1	08/22/16	MR	08/18/16	OP48454	MSW1189

The QC reported here applies to the following samples: **Method:** SW846 8270D

MC47325-9

CAS No.	Compound	Result	RL	Units	Q
121-14-2	2,4-Dinitrotoluene	ND	490	ug/kg	
606-20-2	2,6-Dinitrotoluene	ND	490	ug/kg	
91-94-1	3,3'-Dichlorobenzidine	ND	490	ug/kg	
53-70-3	Dibenzo(a,h)anthracene	ND	98	ug/kg	
132-64-9	Dibenzofuran	ND	98	ug/kg	
84-74-2	Di-n-butyl phthalate	ND	250	ug/kg	
117-84-0	Di-n-octyl phthalate	ND	250	ug/kg	
84-66-2	Diethyl phthalate	ND	250	ug/kg	
131-11-3	Dimethyl phthalate	ND	250	ug/kg	
117-81-7	bis(2-Ethylhexyl)phthalate	ND	250	ug/kg	
206-44-0	Fluoranthene	ND	98	ug/kg	
86-73-7	Fluorene	ND	98	ug/kg	
118-74-1	Hexachlorobenzene	ND	250	ug/kg	
87-68-3	Hexachlorobutadiene	ND	250	ug/kg	
77-47-4	Hexachlorocyclopentadiene	ND	490	ug/kg	
67-72-1	Hexachloroethane	ND	250	ug/kg	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	250	ug/kg	
78-59-1	Isophorone	ND	250	ug/kg	
91-57-6	2-Methylnaphthalene	ND	98	ug/kg	
91-20-3	Naphthalene	ND	98	ug/kg	
98-95-3	Nitrobenzene	ND	250	ug/kg	
621-64-7	N-Nitroso-di-n-propylamine	ND	250	ug/kg	
86-30-6	N-Nitrosodiphenylamine	ND	250	ug/kg	
85-01-8	Phenanthrene	ND	98	ug/kg	
129-00-0	Pyrene	ND	98	ug/kg	
120-82-1	1,2,4-Trichlorobenzene	ND	250	ug/kg	

CAS No.	Surrogate Recoveries		Limits
367-12-4	2-Fluorophenol	55%	25-109%
4165-62-2	Phenol-d5	57%	29-113%
118-79-6	2,4,6-Tribromophenol	63%	20-141%
4165-60-0	Nitrobenzene-d5	52%	27-115%
321-60-8	2-Fluorobiphenyl	58%	34-118%
1718-51-0	Terphenyl-d14	66%	42-139%

7.1.1

Blank Spike/Blank Spike Duplicate Summary

Job Number: MC47325
Account: ENVTRAC EnviroTrac
Project: Maggiore Somerville, 343 - 351 Summer Street, Somerville, MA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP48454-BS	W29519.D	1	08/22/16	MR	08/18/16	OP48454	MSW1189
OP48454-BSD	W29520.D	1	08/22/16	MR	08/18/16	OP48454	MSW1189

The QC reported here applies to the following samples: **Method:** SW846 8270D

MC47325-9

CAS No.	Compound	Spike ug/kg	BSP ug/kg	BSP %	BSD ug/kg	BSD %	RPD	Limits Rec/RPD
65-85-0	Benzoic acid	2450	2360	96	2130	88	10	10-136/30
95-57-8	2-Chlorophenol	2450	1700	69	1470	61	15	39-104/30
59-50-7	4-Chloro-3-methyl phenol	2450	2060	84	1660	68	22	51-110/30
120-83-2	2,4-Dichlorophenol	2450	2000	82	1650	68	19	47-109/30
105-67-9	2,4-Dimethylphenol	2450	1880	77	1550	64	19	43-105/30
51-28-5	2,4-Dinitrophenol	2450	2140	87	1940	80	10	10-130/30
95-48-7	2-Methylphenol	2450	1740	71	1480	61	16	40-105/30
	3&4-Methylphenol	4890	3600	74	3000	62	18	39-113/30
88-75-5	2-Nitrophenol	2450	1680	69	1590	66	6	41-112/30
100-02-7	4-Nitrophenol	2450	1930	79	1610	66	18	28-134/30
87-86-5	Pentachlorophenol	2450	2240	92	1900	78	16	22-123/30
108-95-2	Phenol	2450	1800	74	1500	62	18	40-107/30
95-95-4	2,4,5-Trichlorophenol	2450	2110	86	1700	70	22	54-115/30
88-06-2	2,4,6-Trichlorophenol	2450	2130	87	1740	72	20	51-110/30
83-32-9	Acenaphthene	2450	1770	72	1470	61	19	49-108/30
208-96-8	Acenaphthylene	2450	1380	56	1130	47	20	37-102/30
98-86-2	Acetophenone	2450	1440	59	1240	51	15	37-105/30
62-53-3	Aniline	2450	1190	49	921	38	25	10-90/30
120-12-7	Anthracene	2450	1760	72	1420	59	21	54-111/30
56-55-3	Benzo(a)anthracene	2450	1840	75	1500	62	20	56-117/30
50-32-8	Benzo(a)pyrene	2450	1700	69	1370	57	21	57-117/30
205-99-2	Benzo(b)fluoranthene	2450	1740	71	1370	57	24	55-122/30
191-24-2	Benzo(g,h,i)perylene	2450	1830	75	1470	61	22	52-123/30
207-08-9	Benzo(k)fluoranthene	2450	1750	72	1440	59	19	54-117/30
101-55-3	4-Bromophenyl phenyl ether	2450	1870	76	1490	61	23	54-118/30
85-68-7	Butyl benzyl phthalate	2450	1980	81	1600	66	21	54-121/30
91-58-7	2-Chloronaphthalene	2450	1710	70	1430	59	18	46-114/30
106-47-8	4-Chloroaniline	2450	1060	43	734	30	36* a	12-88/30
218-01-9	Chrysene	2450	1810	74	1480	61	20	56-114/30
111-91-1	bis(2-Chloroethoxy)methane	2450	1590	65	1310	54	19	41-106/30
111-44-4	bis(2-Chloroethyl)ether	2450	1350	55	1190	49	13	28-113/30
108-60-1	bis(2-Chloroisopropyl)ether	2450	1510	62	1300	54	15	30-132/30
95-50-1	1,2-Dichlorobenzene	2450	1290	53	1240	51	4	34-100/30
122-66-7	1,2-Diphenylhydrazine	2450	1800	74	1450	60	22	43-117/30
541-73-1	1,3-Dichlorobenzene	2450	1220	50	1240	51	2	35-99/30
106-46-7	1,4-Dichlorobenzene	2450	1200	49	1210	50	1	35-98/30

* = Outside of Control Limits.

Blank Spike/Blank Spike Duplicate Summary

Job Number: MC47325
Account: ENVTRAC EnviroTrac
Project: Maggiore Somerville, 343 - 351 Summer Street, Somerville, MA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP48454-BS	W29519.D	1	08/22/16	MR	08/18/16	OP48454	MSW1189
OP48454-BSD	W29520.D	1	08/22/16	MR	08/18/16	OP48454	MSW1189

The QC reported here applies to the following samples: **Method:** SW846 8270D

MC47325-9

CAS No.	Compound	Spike ug/kg	BSP ug/kg	BSP %	BSD ug/kg	BSD %	RPD	Limits Rec/RPD
121-14-2	2,4-Dinitrotoluene	2450	1900	78	1650	68	14	50-121/30
606-20-2	2,6-Dinitrotoluene	2450	1840	75	1570	65	16	52-115/30
91-94-1	3,3'-Dichlorobenzidine	2450	765	31	884	36	14	17-120/30
53-70-3	Dibenzo(a,h)anthracene	2450	1780	73	1430	59	22	54-121/30
132-64-9	Dibenzofuran	2450	1720	70	1400	58	21	52-109/30
84-74-2	Di-n-butyl phthalate	2450	1930	79	1550	64	22	55-113/30
117-84-0	Di-n-octyl phthalate	2450	1720	70	1420	59	19	53-126/30
84-66-2	Diethyl phthalate	2450	1870	76	1490	61	23	54-111/30
131-11-3	Dimethyl phthalate	2450	1850	76	1480	61	22	53-111/30
117-81-7	bis(2-Ethylhexyl)phthalate	2450	1820	74	1490	61	20	55-125/30
206-44-0	Fluoranthene	2450	1900	78	1520	63	22	55-116/30
86-73-7	Fluorene	2450	1860	76	1490	61	22	52-111/30
118-74-1	Hexachlorobenzene	2450	1840	75	1480	61	22	52-117/30
87-68-3	Hexachlorobutadiene	2450	1460	60	1310	54	11	36-108/30
77-47-4	Hexachlorocyclopentadiene	2450	1120	46	971	40	14	10-99/30
67-72-1	Hexachloroethane	2450	1250	51	1250	52	0	33-100/30
193-39-5	Indeno(1,2,3-cd)pyrene	2450	1680	69	1390	57	19	55-120/30
78-59-1	Isophorone	2450	1570	64	1320	54	17	37-101/30
91-57-6	2-Methylnaphthalene	2450	1620	66	1370	57	17	38-114/30
91-20-3	Naphthalene	2450	1510	62	1310	54	14	27-128/30
98-95-3	Nitrobenzene	2450	1580	65	1400	58	12	33-108/30
621-64-7	N-Nitroso-di-n-propylamine	2450	1670	68	1380	57	19	37-112/30
86-30-6	N-Nitrosodiphenylamine	2450	1710	70	1390	57	21	47-114/30
85-01-8	Phenanthrene	2450	1850	76	1470	61	23	54-112/30
129-00-0	Pyrene	2450	1880	77	1540	64	20	54-118/30
120-82-1	1,2,4-Trichlorobenzene	2450	1490	61	1300	54	14	38-105/30

CAS No.	Surrogate Recoveries	BSP	BSD	Limits
367-12-4	2-Fluorophenol	66%	58%	25-109%
4165-62-2	Phenol-d5	69%	58%	29-113%
118-79-6	2,4,6-Tribromophenol	88%	76%	20-141%
4165-60-0	Nitrobenzene-d5	62%	58%	27-115%
321-60-8	2-Fluorobiphenyl	73%	61%	34-118%
1718-51-0	Terphenyl-d14	84%	69%	42-139%

* = Outside of Control Limits.

Blank Spike/Blank Spike Duplicate Summary

Job Number: MC47325
Account: ENVTRAC EnviroTrac
Project: Maggiore Somerville, 343 - 351 Summer Street, Somerville, MA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP48454-BS	W29519.D	1	08/22/16	MR	08/18/16	OP48454	MSW1189
OP48454-BSD	W29520.D	1	08/22/16	MR	08/18/16	OP48454	MSW1189

The QC reported here applies to the following samples: **Method:** SW846 8270D

MC47325-9

(a) Outside control limits. Individual spike recoveries within in-house acceptance limits.

* = Outside of Control Limits.

Semivolatile Internal Standard Area Summary

Job Number: MC47325
Account: ENVTRAC EnviroTrac
Project: Maggiore Somerville, 343 - 351 Summer Street, Somerville, MA

Check Std: MSW1189-CC1188 **Injection Date:** 08/22/16
Lab File ID: W29517.D **Injection Time:** 17:58
Instrument ID: GCMSW **Method:** SW846 8270D

	IS 1 AREA	RT	IS 2 AREA	RT	IS 3 AREA	RT	IS 4 AREA	RT	IS 5 AREA	RT	IS 6 AREA	RT
Check Std	189034	4.43	703893	5.49	432696	7.03	782942	8.33	808294	11.58	726913	14.89
Upper Limit [a]	378068	4.93	1407786	5.99	865392	7.53	1565884	8.83	1616588	12.08	1453826	15.39
Lower Limit [b]	94517	3.93	351947	4.99	216348	6.53	391471	7.83	404147	11.08	363457	14.39

Lab Sample ID	IS 1 AREA	RT	IS 2 AREA	RT	IS 3 AREA	RT	IS 4 AREA	RT	IS 5 AREA	RT	IS 6 AREA	RT
OP48454-MB	220479	4.43	823008	5.49	499737	7.03	907397	8.33	901467	11.57	819092	14.89
OP48454-BS	223400	4.43	836493	5.49	514074	7.03	934598	8.33	949547	11.57	856338	14.89
OP48454-BSD	239631	4.43	893635	5.49	547688	7.03	988342	8.33	991503	11.57	893657	14.89
ZZZZZZ	237838	4.43	887906	5.49	543660	7.03	979923	8.33	970975	11.57	880660	14.89
ZZZZZZ	202225	4.43	764898	5.49	466218	7.03	863209	8.33	881002	11.58	811243	14.89
ZZZZZZ	231930	4.43	873839	5.49	536507	7.03	969592	8.33	963822	11.57	869894	14.89
ZZZZZZ	235294	4.43	879342	5.49	541827	7.03	975218	8.33	978408	11.58	871304	14.90
ZZZZZZ	229609	4.43	871907	5.49	537138	7.03	966295	8.33	969509	11.57	883787	14.89
ZZZZZZ	242129	4.43	911749	5.49	552661	7.03	1000812	8.33	988404	11.57	887701	14.89
ZZZZZZ	226600	4.43	853962	5.49	521802	7.03	923991	8.33	979324	11.60	808533	14.90
ZZZZZZ	233940	4.43	880471	5.49	549794	7.03	989331	8.33	993169	11.58	885537	14.90
ZZZZZZ	222859	4.43	842054	5.49	515505	7.03	926191	8.33	916361	11.57	824274	14.89
ZZZZZZ	221517	4.43	839195	5.49	512028	7.03	927549	8.33	910181	11.57	807777	14.89
ZZZZZZ	239340	4.43	894864	5.49	550535	7.03	980843	8.33	956465	11.58	826943	14.89
ZZZZZZ	238004	4.43	900489	5.49	551313	7.03	990859	8.33	958958	11.58	831492	14.89
ZZZZZZ	232454	4.43	875775	5.49	538215	7.03	977371	8.33	972697	11.58	864574	14.89
ZZZZZZ	217831	4.45	798005	5.49	513761	7.03	922870	8.33	921495	11.58	831007	14.89
MC47325-9 [c]	204823	4.43	771959	5.49	479123	7.03	874264	8.33	940999	11.59	867731	14.91

IS 1 = 1,4-Dichlorobenzene-d4
IS 2 = Naphthalene-d8
IS 3 = Acenaphthene-D10
IS 4 = Phenanthrene-d10
IS 5 = Chrysene-d12
IS 6 = Perylene-d12

(a) Upper Limit = + 100% of check standard area; Retention time + 0.5 minutes.
(b) Lower Limit = -50% of check standard area; Retention time -0.5 minutes.
(c) Elevated RL due to dilution required for matrix interference.

Semivolatile Surrogate Recovery Summary

Job Number: MC47325
Account: ENVTRAC EnviroTrac
Project: Maggiore Somerville, 343 - 351 Summer Street, Somerville, MA

Method: SW846 8270D **Matrix:** SO

Samples and QC shown here apply to the above method

Lab Sample ID	Lab File ID	S1	S2	S3	S4	S5	S6
MC47325-9	W29535.D	62	79	163* [a]	0* [a]	82	83
OP48454-BS	W29519.D	66	69	88	62	73	84
OP48454-BSD	W29520.D	58	58	76	58	61	69
OP48454-MB	W29518.D	55	57	63	52	58	66

Surrogate Compounds	Recovery Limits
S1 = 2-Fluorophenol	25-109%
S2 = Phenol-d5	29-113%
S3 = 2,4,6-Tribromophenol	20-141%
S4 = Nitrobenzene-d5	27-115%
S5 = 2-Fluorobiphenyl	34-118%
S6 = Terphenyl-d14	42-139%

(a) Outside control limits due to matrix interference compounded by dilution.

GC Volatiles

QC Data Summaries

Includes the following where applicable:

- Method Blank Summaries
- Blank Spike Summaries
- Matrix Spike and Duplicate Summaries
- Surrogate Recovery Summaries

Method Blank Summary

Job Number: MC47325
Account: ENVTRAC EnviroTrac
Project: Maggiore Somerville, 343 - 351 Summer Street, Somerville, MA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
GAB5243-MB	AB94979.D	1	08/18/16	DF	n/a	n/a	GAB5243

The QC reported here applies to the following samples: **Method:** MADEP VPH REV 1.1

MC47325-1, MC47325-2, MC47325-3, MC47325-4, MC47325-5, MC47325-6, MC47325-7, MC47325-8, MC47325-9

B.1.1

CAS No.	Compound	Result	RL	Units	Q
71-43-2	Benzene	ND	250	ug/kg	
100-41-4	Ethylbenzene	ND	250	ug/kg	
1634-04-4	Methyl Tert Butyl Ether	ND	50	ug/kg	
91-20-3	Naphthalene	ND	250	ug/kg	
108-88-3	Toluene	ND	250	ug/kg	
	m,p-Xylene	ND	250	ug/kg	
95-47-6	o-Xylene	ND	250	ug/kg	
	C5- C8 Aliphatics (Unadj.)	ND	5000	ug/kg	
	C9- C12 Aliphatics (Unadj.)	ND	5000	ug/kg	
	C9- C10 Aromatics (Unadj.)	ND	5000	ug/kg	
	C5- C8 Aliphatics	ND	5000	ug/kg	
	C9- C12 Aliphatics	ND	5000	ug/kg	

CAS No.	Surrogate Recoveries		Limits
	2,3,4-Trifluorotoluene	97%	70-130%
	2,3,4-Trifluorotoluene	99%	70-130%

Blank Spike/Blank Spike Duplicate Summary

Job Number: MC47325
Account: ENVTRAC EnviroTrac
Project: Maggiore Somerville, 343 - 351 Summer Street, Somerville, MA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
GAB5243-BSP	AB94980.D	1	08/18/16	DF	n/a	n/a	GAB5243
GAB5243-BSD	AB94981.D	1	08/18/16	DF	n/a	n/a	GAB5243

The QC reported here applies to the following samples: **Method:** MADEP VPH REV 1.1

MC47325-1, MC47325-2, MC47325-3, MC47325-4, MC47325-5, MC47325-6, MC47325-7, MC47325-8, MC47325-9

B.2.1

CAS No.	Compound	Spike ug/kg	BSP ug/kg	BSP %	BSD ug/kg	BSD %	RPD	Limits Rec/RPD
71-43-2	Benzene	2500	2720	109	2660	106	2	70-130/25
100-41-4	Ethylbenzene	2500	2700	108	2660	106	1	70-130/25
1634-04-4	Methyl Tert Butyl Ether	2500	2670	107	2630	105	2	70-130/25
91-20-3	Naphthalene	2500	2580	103	2550	102	1	70-130/25
108-88-3	Toluene	2500	2750	110	2690	108	2	70-130/25
	m,p-Xylene	5000	5750	115	5630	113	2	70-130/25
95-47-6	o-Xylene	2500	2710	108	2660	106	2	70-130/25
	C5- C8 Aliphatics (Unadj.)	7500	7740	103	7590	101	2	70-130/25
	C9- C12 Aliphatics (Unadj.)	7500	7740	103	7620	102	2	70-130/25
	C9- C10 Aromatics (Unadj.)	2500	2770	111	2720	109	2	70-130/25

CAS No.	Surrogate Recoveries	BSP	BSD	Limits
	2,3,4-Trifluorotoluene	94%	95%	70-130%
	2,3,4-Trifluorotoluene	96%	97%	70-130%

* = Outside of Control Limits.

Volatile Surrogate Recovery Summary

Job Number: MC47325
Account: ENVTRAC Envirotrac
Project: Maggiore Somerville, 343 - 351 Summer Street, Somerville, MA

Method: MADEP VPH REV 1.1 **Matrix:** SO

Samples and QC shown here apply to the above method

Lab Sample ID	Lab File ID	S1 [a]	S1 [b]
MC47325-1	AB94983.D	74	76
MC47325-2	AB94984.D	75	77
MC47325-3	AB94985.D	75	76
MC47325-4	AB94986.D	71	73
MC47325-5	AB94987.D	77	79
MC47325-6	AB94988.D	74	77
MC47325-7	AB94989.D	73	76
MC47325-8	AB94990.D	74	77
MC47325-9	AB94991.D	78	83
GAB5243-BSD	AB94981.D	95	97
GAB5243-BSP	AB94980.D	94	96
GAB5243-MB	AB94979.D	97	99

Surrogate Compounds	Recovery Limits
S1 = 2,3,4-Trifluorotoluene	70-130%

(a) Recovery from GC signal #2
(b) Recovery from GC signal #1

8.3.1

GC Semi-volatiles

QC Data Summaries

Includes the following where applicable:

- Method Blank Summaries
- Blank Spike Summaries
- Matrix Spike and Duplicate Summaries
- Surrogate Recovery Summaries

SGS ACCUTEST 95 of 119

Method Blank Summary

Job Number: MC47325
Account: ENVTRAC EnviroTrac
Project: Maggiore Somerville, 343 - 351 Summer Street, Somerville, MA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP48449-MB	DE15275.D	1	08/23/16	TA	08/17/16	OP48449	GDE853

The QC reported here applies to the following samples: **Method:** MADEP EPH REV 1.1

MC47325-1, MC47325-2, MC47325-3, MC47325-4, MC47325-5, MC47325-6, MC47325-7, MC47325-8, MC47325-9

CAS No.	Compound	Result	RL	Units	Q
83-32-9	Acenaphthene	ND	420	ug/kg	
208-96-8	Acenaphthylene	ND	420	ug/kg	
120-12-7	Anthracene	ND	420	ug/kg	
56-55-3	Benzo(a)anthracene	ND	420	ug/kg	
50-32-8	Benzo(a)pyrene	ND	420	ug/kg	
205-99-2	Benzo(b)fluoranthene	ND	420	ug/kg	
191-24-2	Benzo(g,h,i)perylene	ND	420	ug/kg	
207-08-9	Benzo(k)fluoranthene	ND	420	ug/kg	
218-01-9	Chrysene	ND	420	ug/kg	
53-70-3	Dibenz(a,h)anthracene	ND	420	ug/kg	
206-44-0	Fluoranthene	ND	420	ug/kg	
86-73-7	Fluorene	ND	420	ug/kg	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	420	ug/kg	
91-57-6	2-Methylnaphthalene	ND	420	ug/kg	
91-20-3	Naphthalene	ND	420	ug/kg	
85-01-8	Phenanthrene	ND	420	ug/kg	
129-00-0	Pyrene	ND	420	ug/kg	
	C11-C22 Aromatics (Unadj.)	ND	17000	ug/kg	
	C9-C18 Aliphatics	ND	8500	ug/kg	
	C19-C36 Aliphatics	ND	17000	ug/kg	
	C11-C22 Aromatics	ND	17000	ug/kg	

CAS No.	Surrogate Recoveries		Limits
84-15-1	o-Terphenyl	93%	40-140%
321-60-8	2-Fluorobiphenyl	80%	40-140%
580-13-2	2-Bromonaphthalene	56%	40-140%
3386-33-2	1-Chlorooctadecane	121%	40-140%

9.1.1

Method Blank Summary

Job Number: MC47325
Account: ENVTRAC EnviroTrac
Project: Maggiore Somerville, 343 - 351 Summer Street, Somerville, MA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP48455-MB	BK60845.D	1	08/19/16	NK	08/17/16	OP48455	GBK1912

The QC reported here applies to the following samples: **Method:** SW846 8082A

MC47325-9

CAS No.	Compound	Result	RL	Units	Q
12674-11-2	Aroclor 1016	ND	25	ug/kg	
11104-28-2	Aroclor 1221	ND	25	ug/kg	
11141-16-5	Aroclor 1232	ND	25	ug/kg	
53469-21-9	Aroclor 1242	ND	25	ug/kg	
12672-29-6	Aroclor 1248	ND	25	ug/kg	
11097-69-1	Aroclor 1254	ND	25	ug/kg	
11096-82-5	Aroclor 1260	ND	25	ug/kg	
37324-23-5	Aroclor 1262	ND	25	ug/kg	
11100-14-4	Aroclor 1268	ND	25	ug/kg	

CAS No.	Surrogate Recoveries		Limits
877-09-8	Tetrachloro-m-xylene	73%	25-145%
877-09-8	Tetrachloro-m-xylene	73%	25-145%
2051-24-3	Decachlorobiphenyl	91%	25-179%
2051-24-3	Decachlorobiphenyl	90%	25-179%

9.1.2

Blank Spike/Blank Spike Duplicate Summary

Job Number: MC47325
Account: ENVTRAC EnviroTrac
Project: Maggiore Somerville, 343 - 351 Summer Street, Somerville, MA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP48449-BS	DE15273.D	1	08/23/16	TA	08/17/16	OP48449	GDE853
OP48449-BSD	DE15274.D	1	08/23/16	TA	08/17/16	OP48449	GDE853

The QC reported here applies to the following samples: **Method:** MADEP EPH REV 1.1

MC47325-1, MC47325-2, MC47325-3, MC47325-4, MC47325-5, MC47325-6, MC47325-7, MC47325-8, MC47325-9

CAS No.	Compound	Spike ug/kg	BSP ug/kg	BSP %	BSD ug/kg	BSD %	RPD	Limits Rec/RPD
83-32-9	Acenaphthene	4230	2480	59	2690	63	8	40-140/25
208-96-8	Acenaphthylene	4230	2440	58	2640	62	8	40-140/25
120-12-7	Anthracene	4230	2600	61	2850	67	9	40-140/25
56-55-3	Benzo(a)anthracene	4230	3280	78	3610	84	10	40-140/25
50-32-8	Benzo(a)pyrene	4230	3160	75	3470	81	9	40-140/25
205-99-2	Benzo(b)fluoranthene	4230	3520	83	3570	83	1	40-140/25
191-24-2	Benzo(g,h,i)perylene	4230	3400	80	3830	90	12	40-140/25
207-08-9	Benzo(k)fluoranthene	4230	2880	68	3440	80	18	40-140/25
218-01-9	Chrysene	4230	3050	72	3370	79	10	40-140/25
53-70-3	Dibenz(a,h)anthracene	4230	3320	78	3650	85	9	40-140/25
206-44-0	Fluoranthene	4230	3110	74	3410	80	9	40-140/25
86-73-7	Fluorene	4230	2660	63	2920	68	9	40-140/25
193-39-5	Indeno(1,2,3-cd)pyrene	4230	3240	77	3640	85	12	40-140/25
91-57-6	2-Methylnaphthalene	4230	2430	57	2640	62	8	40-140/25
91-20-3	Naphthalene	4230	1910	45	2050	48	7	40-140/25
85-01-8	Phenanthrene	4230	2880	68	3210	75	11	40-140/25
129-00-0	Pyrene	4230	3070	73	3330	78	8	40-140/25
	C11-C22 Aromatics (Unadj.)	67700	54300	80 [a]	58700	86 [a]	8	40-140/25
	C9-C18 Aliphatics	25400	10900	43	15900	62	37* [b]	40-140/25
	C19-C36 Aliphatics	33800	19200	57	28600	84	39* [b]	40-140/25

CAS No.	Surrogate Recoveries	BSP	BSD	Limits
84-15-1	o-Terphenyl	98%	98%	40-140%
321-60-8	2-Fluorobiphenyl	89%	86%	40-140%
580-13-2	2-Bromonaphthalene	55%	52%	40-140%
3386-33-2	1-Chlorooctadecane	84%	115%	40-140%

Sample	Compound	Col #1	Col #2	Breakthrough	Limit
OP48449-BS	2-Methylnaphthalene	2430	97.1	3.8%	5.0
OP48449-BS	Naphthalene	1910	160	7.7%*	5.0
OP48449-BSD	2-Methylnaphthalene	2640	113	4.1%	5.0
OP48449-BSD	Naphthalene	2050	204	9.1%*	5.0

* = Outside of Control Limits

Blank Spike/Blank Spike Duplicate Summary

Job Number: MC47325
Account: ENVTRAC EnviroTrac
Project: Maggiore Somerville, 343 - 351 Summer Street, Somerville, MA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP48449-BS	DE15273.D	1	08/23/16	TA	08/17/16	OP48449	GDE853
OP48449-BSD	DE15274.D	1	08/23/16	TA	08/17/16	OP48449	GDE853

The QC reported here applies to the following samples: **Method:** MADEP EPH REV 1.1

MC47325-1, MC47325-2, MC47325-3, MC47325-4, MC47325-5, MC47325-6, MC47325-7, MC47325-8, MC47325-9

(a) Aromatic breakthrough (naphthalene and/or 2-methylnaphthalene) exceeded 5% method limit. Results confirmed by refractionation.
(b) Range recovery satisfactory.

* = Outside of Control Limits.

Blank Spike/Blank Spike Duplicate Summary

Job Number: MC47325
Account: ENVTRAC EnviroTrac
Project: Maggiore Somerville, 343 - 351 Summer Street, Somerville, MA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP48455-BS	BK60846.D	1	08/19/16	NK	08/17/16	OP48455	GBK1912
OP48455-BSD	BK60847.D	1	08/19/16	NK	08/17/16	OP48455	GBK1912

The QC reported here applies to the following samples: **Method:** SW846 8082A

MC47325-9

CAS No.	Compound	Spike ug/kg	BSP ug/kg	BSP %	BSD ug/kg	BSD %	RPD	Limits Rec/RPD
12674-11-2	Aroclor 1016	264	226	85	205	81	10	47-144/30
11104-28-2	Aroclor 1221		ND		ND		nc	40-140/30
11141-16-5	Aroclor 1232		ND		ND		nc	40-140/30
53469-21-9	Aroclor 1242		ND		ND		nc	40-140/30
12672-29-6	Aroclor 1248		ND		ND		nc	40-140/30
11097-69-1	Aroclor 1254		ND		ND		nc	40-140/30
11096-82-5	Aroclor 1260	264	236	89	210	83	12	45-156/30
37324-23-5	Aroclor 1262		ND		ND		nc	40-140/30
11100-14-4	Aroclor 1268		ND		ND		nc	40-140/30

CAS No.	Surrogate Recoveries	BSP	BSD	Limits
877-09-8	Tetrachloro-m-xylene	78%	72%	25-145%
877-09-8	Tetrachloro-m-xylene	81%	82%	25-145%
2051-24-3	Decachlorobiphenyl	97%	91%	25-179%
2051-24-3	Decachlorobiphenyl	99%	98%	25-179%

* = Outside of Control Limits.

Semivolatile Surrogate Recovery Summary

Job Number: MC47325
Account: ENVTRAC EnviroTrac
Project: Maggiore Somerville, 343 - 351 Summer Street, Somerville, MA

Method: SW846 8082A **Matrix:** SO

Samples and QC shown here apply to the above method

Lab Sample ID	Lab File ID	S1 [a]	S1 [b]	S2 [a]	S2 [b]
MC47325-9	BK60925.D	67	53	58	46
OP48455-BS	BK60846.D	78	81	97	99
OP48455-BSD	BK60847.D	72	82	91	98
OP48455-MB	BK60845.D	73	73	91	90

Surrogate Compounds	Recovery Limits
S1 = Tetrachloro-m-xylene	25-145%
S2 = Decachlorobiphenyl	25-179%

(a) Recovery from GC signal #1
(b) Recovery from GC signal #2

Semivolatile Surrogate Recovery Summary

Job Number: MC47325
Account: ENVTRAC EnviroTrac
Project: Maggiore Somerville, 343 - 351 Summer Street, Somerville, MA

Method: MADEP EPH REV 1.1 **Matrix:** SO

Samples and QC shown here apply to the above method

Lab Sample ID	Lab File ID	S1 [a]	S2 [a]	S3 [a]	S4 [b]
MC47325-1	DE15309.D	132	73	78	93
MC47325-2	DE15277.D	84	82	78	101
MC47325-3	DE15301.D	211* [c]	79	60	68
MC47325-3	DE15278.D	225* [c]	90	77	87
MC47325-4	DE15279.D	84	78	87	95
MC47325-5	DE15280.D	122	81	90	88
MC47325-6	DE15281.D	82	94	110	65
MC47325-7	DE15282.D	82	84	95	80
MC47325-8	DE15284.D	90	81	84	83
MC47325-9	DE15302.D	134	81	53	88
MC47325-9	DE15285.D	132	90	66	250* [d]
OP48449-BS	DE15273.D	98	89	55	84
OP48449-BSD	DE15274.D	98	86	52	115
OP48449-MB	DE15275.D	93	80	56	121

Surrogate Compounds	Recovery Limits
S1 = o-Terphenyl	40-140%
S2 = 2-Fluorobiphenyl	40-140%
S3 = 2-Bromonaphthalene	40-140%
S4 = 1-Chlorooctadecane	40-140%

(a) Recovery from GC signal #1
(b) Recovery from GC signal #2
(c) Outside control limits due to matrix interference. Confirmed by reanalysis.
(d) Outside control limits due to possible matrix interference.

Metals Analysis

QC Data Summaries

Includes the following where applicable:

- Method Blank Summaries
- Matrix Spike and Duplicate Summaries
- Blank Spike and Lab Control Sample Summaries
- Serial Dilution Summaries

[illegible]

Metal	RL	IDL	MDL	MB raw	final
[illegible]	[illegible]	[illegible]	[illegible]		
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	<1.0
[illegible]	[illegible]	[illegible]	.2	-0.10	<1.0
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	<5.0
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	.15		
[illegible]	[illegible]	[illegible]	[illegible]		
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]		
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	.031		
[illegible]	[illegible]	[illegible]	.1		
[illegible]	[illegible]	[illegible]	.11		
[illegible]	[illegible]	[illegible]	[illegible]		
[illegible]	[illegible]	[illegible]	.11	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]		
[illegible]	[illegible]	[illegible]	[illegible]		
Manganese	1.5	.0051	.047		
Molybdenum	10	.16	.51		
Nickel	4.0	.034	.057	0.070	<4.0
Palladium	5.0	.18	.14		
Platinum	5.0	.87	.54		
Potassium	500	7.4	3.4		
Selenium	1.0	.28	.3	-0.080	<1.0
Silicon	10	1.5	.51		
Silver	0.50	.075	.061	-0.060	<0.50
Sodium	500	2.3	1.2		
Sulfur	5.0	.37	.31		
Strontium	1.0	.027	.022		
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Tin	10	.052	.078		
Titanium	5.0	.054	.054		
Tungsten	10	.4	.93		

[illegible]

Prep Date: 08/18/16

Metal	RL	IDL	MDL	MB raw	final
Vanadium	1.0	[illegible]	[illegible]	[illegible]	<1.0
Zinc	2.0	.079	[illegible]	[illegible]	<2.0
Zirconium	5.0	.036	.17		

Associated samples MP26648: MC47325-9

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(anr) Analyte not requested

SPIKE BLANK AND LAB CONTROL SAMPLE SUMMARY

Login Number: MC47325
343 - 351 Summer Street, Somerville, MA

QC Batch ID:
SOLID

Methods: SW846 6010C

	08/18/16				08/18/16				
	BSP Result	Spikelot MPICP7	% Rec	QC Limits	BSD Result	Spikelot MPICP7	% Rec	RPD	RPD Limit
Antimony	47.0	50	94.0	80-120	47.8	50	95.6	1.7	20
Arsenic	45.2	50	90.4	80-120	45.7	50	91.4	1.1	20
Barium	183	200	91.5	80-120	186	200	93.0	1.6	20
Beryllium	45.8	50	91.6	80-120	46.6	50	93.2	1.7	20
Bismuth									
Cadmium	48.8	50	97.6	80-120	50.1	50	100.2	2.6	20
Calcium	anr								
Chromium	44.5	50	89.0	80-120	45.2	50	90.4	1.6	20
Iron	anr								
Lead	91.5	100	91.5	80-120	93.2	100	93.2	1.8	20
Magnesium	anr								
Manganese	anr								
Molybdenum									
Nickel	45.2	50	90.4	80-120	45.8	50	91.6	1.3	20
Palladium									
Selenium	47.5	50	95.0	80-120	48.8	50	97.6	2.7	20
Silver	17.8	20	89.0	80-120	18.2	20	91.0	2.2	20
Sodium	anr								
Sulfur									
Thallium	47.6	50	95.2	80-120	48.6	50	97.2	2.1	20
Tin									
Tungsten									

10.1.2 10

SPIKE BLANK AND LAB CONTROL SAMPLE SUMMARY

Login Number: MC47325
Account: ENVTRAC - EnviroTrac
Project: Maggiore Somerville, 343 - 351 Summer Street,

QC Batch ID: MP26648
Matrix Type: SOLID

Methods: SW846 6010C
Units: mg/

Prep Date:	08/18/16				08/18/16				
	BSP Result	Spikelot MPICP7	% Rec	QC Limits	BSD Result	Spikelot MPICP7	% Rec	RPD	RPD Limit
Vanadium	48.3	50	96.6	80-120	49.1	50	98.2	1.	20
Zinc	53.1	50	106.2	80-120	54.1	50	108.	1.	20

Associated samples MP26648: MC47325-9

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(anr) Analyte not requested

10.1.2 10

Metal	LCS Result	Spikelot	% Rec	QC Limit
				1-199
				83-117
			86.4	83-118
				82-118
				80-121
			84.1	
				75-125
Thallium	108	119	90.8	79-121

Matrix Type: SOLID

Prep Date: 08/15/16

Metal	LCS Result	Spikelot	% Rec	QC Limit
Vanadium	97.5	102	95.6	78-123
Zinc	221	229	96.5	82-118

Chromium

Associated samples MP26648: MC47325-9

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(anr) Analyte not requested

SERIAL DILUTION RESULTS SUMMARY

Account: ENVTRAC - EnviroTrac
343 - 351 Summer Street, Somerville, MA

QC Batch ID: MP26648 SW846 6010C
SOLID ug/l

Prep Date: 08/18/16

Metal	Original	SDL 1:5	%DIF	QC Limits
Aluminum	anr			
Antimony				
Beryllium			22.2 (a)	
Boron				
				0-10
Calcium				
Chromium	142	151	6.6	
	anr			
Copper				
Gold				
Iron				
Lead				0-10
Magnesium				
Manganese				
Molybdenum				
	98.4	102		
Palladium				
	anr			
	0.00	0.00	NC	
Silicon				
	1.00		100.0(a)	0-10
Sodium	anr			
Sulfur				
Thallium	0.00	0.00	NC	0-10
Tin				
Tungsten				

SERIAL DILUTION RESULTS SUMMARY

Login Number: MC47325
Account: ENVTRAC - EnviroTrac
Project: Maggiore Somerville, 343 - 351 Summer Street, Somerville, MA

QC Batch ID: MP26648 Methods: SW846 6010C
Matrix Type: SOLID Units: ug/l

Prep Date: 08/18/16

Metal	MC47344-1 Original	SDL 1:5	%DIF	QC Limits
Vanadium	214	227	6.3	0-10
Zinc	349	383	9.6	0-10

Associated samples MP26648: MC47325-9

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(anr) Analyte not requested
(a) Percent difference acceptable due to low initial sample concentration (< 50 times IDL).

[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]					19.1	.1	2	19.80198	96.5	80-120

Metal	Sample ml	Final ml	MC47344-1 Raw	Corr.**	PS ug/l	Spike ml	Spike ug/l	Spike ug/l	% Rec	QC Limits
[illegible]										
Zinc										
[illegible]										

Associated samples MP26648: MC47325-9

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(**) Corr. sample result = Raw * (sample volume / final volume)
(anr) Analyte not requested

Part 2 - Method Blanks

Login Number: MC47325

Project: Maggiore Somerville, 343 - 351 Summer Street, Somerville, MA

QC Batch ID: MP26651 Methods: SW846 7471B

Prep Date: 08/19/16

Mercury	0.033	.0058	.0057	-0.0028	<0.033

Associated samples MP26651: MC47325-9

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(anr) Analyte not requested

Account: ENVTRAC - EnviroTrac
Project: Maggiore Somerville, 343 - 351 Summer Street, Somerville, MA

QC Batch ID: MP26651 Methods: SW846 7471B

Prep Date: 08/19/16 08/19/16

Metal	BSP Result	Spikelot HGRWS1	% Rec	QC Limits	BSD Result	Spikelot HGRWS1	% Rec	RPD	RPD Limit
Mercury	0.52	0.5	104.0	80-120	0.50	0.5	100.0	3.9	20

Associated samples MP26651: MC47325-9

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(anr) Analyte not requested

[redacted]

Page 2

10.2.2

10

General Chemistry

QC Data Summaries

Includes the following where applicable:

- Method Blank and Blank Spike Summaries
- Duplicate Summaries
- Matrix Spike Summaries

11

LTS SUMMARY

25
roTrac
mer Street, Somerville, MA

					Spike	BSP	BSP	QC
			0.0	mg/kg				

Page 1

SGS ACCUTEST
New England
07/03/17

SGS ACCUTEST IS PART OF SGS, THE WORLD'S LEADING INSPECTION, VERIFICATION, TESTING AND CERTIFICATION COMPANY.

e-Hardcopy 2.0

Technical Report for

EnviroTrac, Ltd.

Maggiore Somerville, 343 - 351 Summer Street, Somerville, MA

03.990202.00

SGS Accutest Job Number: MC50780

Sampling Date: 06/26/17

Report to:

EnviroTrac
2 Merchant Street Suite 2
Sharon, MA 02067
denat@envirotrac.com

ATTN: Dena Tomassi

Total number of pages in report: 47

Test results contained within this data package meet the requirements of the National Environmental Laboratory Accreditation Program and/or state specific certification programs as applicable.

H. (Brad) Madadian
Lab Director

Client Service contact: Marty Vitanza 508-481-6200

Certifications: MA (M-MA136,SW846 NELAC) CT (PH-0109) NH (250210) RI (00071) FL (E87579) NJ (MA926) PA (6801121) LA (AI171119) ND (R-188) NC (653) IL (002337) WI (399080220) DoD ELAP (L-A-B L2235)

Table of Contents

Sections:

Sample Summary

EnviroTrac, Ltd.

Job No: MC50780

Maggiore Somerville, 343 - 351 Summer Street, Somerville, MA
Project No: 03.990202.00

Sample Number	Collected Date	Time	By	Received	Matrix Code	Type	Client Sample ID
MC50780-1	06/26/17	12:55	LM	06/26/17	SO	Soil	S-9 ~ 10.5'
MC50780-2	06/26/17	13:51	LM	06/26/17	SO	Soil	S-10 ~ 10.5'
MC50780-3	06/26/17	13:03	LM	06/26/17	SO	Soil	S-11 ~ 10.5'
MC50780-4	06/26/17	13:05	LM	06/26/17	SO	Soil	S-12 ~ 10.5'
MC50780-5	06/26/17	13:07	LM	06/26/17	SO	Soil	S-13 ~ 10.5'

Soil samples reported on a dry weight basis unless otherwise indicated on result page.

SAMPLE DELIVERY GROUP CASE NARRATIVE

Client: EnviroTrac, Ltd **Job No:** MC50780

Site: Maggiore Somerville, 343 - 351 Summer Street, Somerville, MA **Report Date** 7/3/2017 3:40:57 PM

5 Sample(s), 0 Trip Blank(s) and 0 Field Blank(s) were collected on 06/26/2017 and were received at SGS Accutest New England on 06/26/2017 properly preserved, at 2.3 Deg C and intact These Samples received a job number of MC50780. A listing of the Laboratory Sample ID, Client Sample ID and dates of collection are presented in the Results Summary Section of this report

Except as noted below, all method specified calibrations and quality control performance criteria were met for this job. For more information, please refer to QC summary pages

Extractables by GC By Method MADEP EPH REV 1.1

Matrix: SO **Batch ID:** OP49808

- All samples were extracted within the recommended method holding time
- All samples were analyzed within the recommended method holding time
- All method blanks for this batch meet method specific criteria

Metals By Method SW846 6010C

Matrix: SO **Batch ID:** N MP1663

- Analysis performed at SGS Accutest, Dayton, NJ

SGS Accutest New England certifies that all analysis were performed within method specification. It is further recommended that this report to be used in its entirety. The Laboratory Director for SGS Accutest New England or assignee as verified by the signature on the cover page has authorized the release of this report(MC50780)

CASE NARRATIVE / CONFORMANCE SUMMARY

Client: SGS Accutest New England **Job No** MC50780

Site: ENVTRAC: Maggiore Somerville, 343 - 351 Summer Street, Somer **Report Date** 7/3/2017 8.43 00 AM

On 06/27/2017, 5 Sample(s), 0 Trip Blank(s) and 0 Field Blank(s) were received at SGS Accutest at a maximum corrected temperature of 3.3 C. Samples were intact and chemically preserved, unless noted below. A SGS Accutest Job Number of MC50780 was assigned to the project. Laboratory sample ID, client sample ID and dates of sample collection are detailed in the report's Results Summary Section

Specified quality control criteria were achieved for this job except as noted below. For more information, please refer to the analytical results and QC summary pages

Metals By Method SW846 6010C

Matrix: SO **Batch ID:** MP1663

- All samples were digested within the recommended method holding time
- All method blanks for this batch meet method specific criteria
- Sample(s) JC45777-3SDL were used as the QC samples for metals
- MC50780-3 for Lead: Elevated detection limit due to dilution required for high interfering element

SGS Accutest certifies that data reported for samples received, listed on the associated custody chain or analytical task order, were produced to specifications meeting the Quality System precision, accuracy and completeness objectives except as noted

Estimated non-standard method measurement uncertainty data is available on request, based on quality control bias and implicit for standard methods. Acceptable uncertainty requires tested parameter quality control data to meet method criteria

SGS Accutest is not responsible for data quality assumptions if partial reports are used and recommends that this report be used in its entirety. Data release is authorized by SGS Accutest indicated via signature on the report cover

Summary of Hits

Job Number: MC50780
Account: EnviroTrac, Ltd
Project: Maggiore Somerville, 343 - 351 Summer Street, Somerville, MA
Collected: 06/26/17

Lab Sample ID / Analyte	Client Sample ID	Result/ Qual	RL	MDL	Units	Method
MC50780-1	**S-9 ~ 10.5'**					
2-Methylnaphthalene		1.39	0.54		mg/kg	MADEP EPH REV 1.1
C11-C22 Aromatics (Unadj.)		81.0	22		mg/kg	MADEP EPH REV 1.1
C9-C18 Aliphatics		188	11		mg/kg	MADEP EPH REV 1.1
C11-C22 Aromatics		79.3	22		mg/kg	MADEP EPH REV 1.1
Lead [a]		11.8	2.5		mg/kg	SW846 6010C
MC50780-2	**S-10 ~ 10.5'**					
Lead [a]		14.6	2.5		mg/kg	SW846 6010C
MC50780-3	**S-11 ~ 10.5'**					
Lead [b]		15.3	5.2		mg/kg	SW846 6010C
MC50780-4	**S-12 ~ 10.5'**					
Lead [a]		12.1	2.5		mg/kg	SW846 6010C
MC50780-5	**S-13 ~ 10.5'**					
Lead [a]		13.0	2.4		mg/kg	SW846 6010C

(a) Analysis performed at SGS Accutest, Dayton, NJ.
(b) Elevated detection limit due to dilution required for high interfering element. Analysis performed at SGS Accutest, Dayton, NJ

Sample Results

Report of Analysis

Report of Analysis

Client Sample ID:	S-9 ~ 10.5'		
Lab Sample ID:	MC50780-1	**Date Sampled:**	06/26/17
Matrix:	SO - Soil	**Date Received:**	06/26/17
Method:	MADEP EPH REV 1.1 SW846 3546	**Percent Solids:**	79.4
Project:	Maggiore Somerville, 343 - 351 Summer Street, Somerville, MA		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	DE18061.D	1	06/28/17 22:58	AP	06/26/17 14:15	OP49808	GDE997
Run #2							

	Initial Weight	Final Volume
Run #1	11.6 g	2.0 ml
Run #2		

CAS No.	Compound	Result	RL	Units	Q
83-32-9	Acenaphthene	ND	0.54	mg/kg	
208-96-8	Acenaphthylene	ND	0.54	mg/kg	
120-12-7	Anthracene	ND	0.54	mg/kg	
56-55-3	Benzo(a)anthracene	ND	0.54	mg/kg	
50-32-8	Benzo(a)pyrene	ND	0.54	mg/kg	
205-99-2	Benzo(b)fluoranthene	ND	0.54	mg/kg	
191-24-2	Benzo(g,h,i)perylene	ND	0.54	mg/kg	
207-08-9	Benzo(k)fluoranthene	ND	0.54	mg/kg	
218-01-9	Chrysene	ND	0.54	mg/kg	
53-70-3	Dibenz(a,h)anthracene	ND	0.54	mg/kg	
206-44-0	Fluoranthene	ND	0.54	mg/kg	
86-73-7	Fluorene	ND	0.54	mg/kg	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	0.54	mg/kg	
91-57-6	2-Methylnaphthalene	1.39	0.54	mg/kg	
91-20-3	Naphthalene	ND	0.54	mg/kg	
85-01-8	Phenanthrene	ND	0.54	mg/kg	
129-00-0	Pyrene	ND	0.54	mg/kg	
	C11-C22 Aromatics (Unadj.)	81.0	22	mg/kg	
	C9-C18 Aliphatics	188	11	mg/kg	
	C19-C36 Aliphatics	ND	22	mg/kg	
	C11-C22 Aromatics	79.3	22	mg/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
84-15-1	o-Terphenyl	88%		40-140%
321-60-8	2-Fluorobiphenyl	98%		40-140%
580-13-2	2-Bromonaphthalene	96%		40-140%
3386-33-2	1-Chlorooctadecane	72%		40-140%

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

SGS Accutest

Report of Analysis

Page 1 of 1

Client Sample ID:	S-9 ~ 10.5'		
Lab Sample ID:	MC50780-1	**Date Sampled:**	06/26/17
Matrix:	SO - Soil	**Date Received:**	06/26/17
		Percent Solids:	79.4
Project:	Maggiore Somerville, 343 - 351 Summer Street, Somerville, MA		

Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Lead [a]	11.8	2.5	mg/kg	1	06/28/17	06/29/17	ANJ	SW846 6010C [1]	SW846 3050B [2]

(1) Instrument QC Batch: N:MA42328
(2) Prep QC Batch: N:MP1663

(a) Analysis performed at SGS Accutest, Dayton, NJ.

RL = Reporting Limit

Report of Analysis

Client Sample ID:	S-10 ~ 10.5'		
Lab Sample ID:	MC50780-2	**Date Sampled:**	06/26/17
Matrix:	SO - Soil	**Date Received:**	06/26/17
Method:	MADEP EPH REV 1.1 SW846 3546	**Percent Solids:**	79.5
Project:	Maggiore Somerville, 343 - 351 Summer Street, Somerville, MA		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	DE18062.D	1	06/28/17 23:26	AP	06/26/17 14:15	OP49808	GDE997
Run #2							

	Initial Weight	Final Volume
Run #1	11.8 g	2.0 ml
Run #2		

CAS No.	Compound	Result	RL	Units	Q
83-32-9	Acenaphthene	ND	0.53	mg/kg	
208-96-8	Acenaphthylene	ND	0.53	mg/kg	
120-12-7	Anthracene	ND	0.53	mg/kg	
56-55-3	Benzo(a)anthracene	ND	0.53	mg/kg	
50-32-8	Benzo(a)pyrene	ND	0.53	mg/kg	
205-99-2	Benzo(b)fluoranthene	ND	0.53	mg/kg	
191-24-2	Benzo(g,h,i)perylene	ND	0.53	mg/kg	
207-08-9	Benzo(k)fluoranthene	ND	0.53	mg/kg	
218-01-9	Chrysene	ND	0.53	mg/kg	
53-70-3	Dibenz(a,h)anthracene	ND	0.53	mg/kg	
206-44-0	Fluoranthene	ND	0.53	mg/kg	
86-73-7	Fluorene	ND	0.53	mg/kg	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	0.53	mg/kg	
91-57-6	2-Methylnaphthalene	ND	0.53	mg/kg	
91-20-3	Naphthalene	ND	0.53	mg/kg	
85-01-8	Phenanthrene	ND	0.53	mg/kg	
129-00-0	Pyrene	ND	0.53	mg/kg	
	C11-C22 Aromatics (Unadj.)	ND	21	mg/kg	
	C9-C18 Aliphatics	ND	11	mg/kg	
	C19-C36 Aliphatics	ND	21	mg/kg	
	C11-C22 Aromatics	ND	21	mg/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
84-15-1	o-Terphenyl	96%		40-140%
321-60-8	2-Fluorobiphenyl	109%		40-140%
580-13-2	2-Bromonaphthalene	121%		40-140%
3386-33-2	1-Chlorooctadecane	74%		40-140%

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

SGS Accutest

Report of Analysis

Client Sample ID:	S-10 ~ 10.5'		
Lab Sample ID:	MC50780-2	**Date Sampled:**	06/26/17
Matrix:	SO - Soil	**Date Received:**	06/26/17
		Percent Solids:	79.5
Project:	Maggiore Somerville, 343 - 351 Summer Street, Somerville, MA		

Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Lead [a]	14.6	2.5	mg/kg	1	06/28/17	06/29/17	ANJ	SW846 6010C [1]	SW846 3050B [2]

(1) Instrument QC Batch: N:MA42328
(2) Prep QC Batch: N:MP1663

(a) Analysis performed at SGS Accutest, Dayton, NJ.

RL = Reporting Limit

Report of Analysis

Client Sample ID:	S-11 ~ 10.5'		
Lab Sample ID:	MC50780-3	**Date Sampled:**	06/26/17
Matrix:	SO - Soil	**Date Received:**	06/26/17
Method:	MADEP EPH REV 1.1 SW846 3546	**Percent Solids:**	77.4
Project:	Maggiore Somerville, 343 - 351 Summer Street, Somerville, MA		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	DE18063.D	1	06/28/17 23:54	AP	06/26/17 14:15	OP49808	GDE997
Run #2							

	Initial Weight	Final Volume
Run #1	12.0 g	2.0 ml
Run #2		

CAS No.	Compound	Result	RL	Units	Q
83-32-9	Acenaphthene	ND	0.54	mg/kg	
208-96-8	Acenaphthylene	ND	0.54	mg/kg	
120-12-7	Anthracene	ND	0.54	mg/kg	
56-55-3	Benzo(a)anthracene	ND	0.54	mg/kg	
50-32-8	Benzo(a)pyrene	ND	0.54	mg/kg	
205-99-2	Benzo(b)fluoranthene	ND	0.54	mg/kg	
191-24-2	Benzo(g,h,i)perylene	ND	0.54	mg/kg	
207-08-9	Benzo(k)fluoranthene	ND	0.54	mg/kg	
218-01-9	Chrysene	ND	0.54	mg/kg	
53-70-3	Dibenz(a,h)anthracene	ND	0.54	mg/kg	
206-44-0	Fluoranthene	ND	0.54	mg/kg	
86-73-7	Fluorene	ND	0.54	mg/kg	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	0.54	mg/kg	
91-57-6	2-Methylnaphthalene	ND	0.54	mg/kg	
91-20-3	Naphthalene	ND	0.54	mg/kg	
85-01-8	Phenanthrene	ND	0.54	mg/kg	
129-00-0	Pyrene	ND	0.54	mg/kg	
	C11-C22 Aromatics (Unadj.)	ND	22	mg/kg	
	C9-C18 Aliphatics	ND	11	mg/kg	
	C19-C36 Aliphatics	ND	22	mg/kg	
	C11-C22 Aromatics	ND	22	mg/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
84-15-1	o-Terphenyl	93%		40-140%
321-60-8	2-Fluorobiphenyl	101%		40-140%
580-13-2	2-Bromonaphthalene	113%		40-140%
3386-33-2	1-Chlorooctadecane	52%		40-140%

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

SGS Accutest

Report of Analysis

Page 1 of 1

Client Sample ID:	S-11 ~ 10.5'		
Lab Sample ID:	MC50780-3	**Date Sampled:**	06/26/17
Matrix:	SO - Soil	**Date Received:**	06/26/17
		Percent Solids:	77.4
Project:	Maggiore Somerville, 343 - 351 Summer Street, Somerville, MA		

Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed By	Method	Prep Method
Lead [a]	15.3	5.2	mg/kg	2	06/28/17	06/29/17 ANJ	SW846 6010C [1]	SW846 3050B [2]

(1) Instrument QC Batch: N:MA42338
(2) Prep QC Batch: N:MP1663

(a) Elevated detection limit due to dilution required for high interfering element. Analysis performed at SGS Accutest, Dayton, NJ.

RL = Reporting Limit

Report of Analysis

Client Sample ID: S-12 ~ 10.5'
Lab Sample ID: MC50780-4
Matrix: SO - Soil
Method: MADEP EPH REV 1.1 SW846 3546
Project: Maggiore Somerville, 343 - 351 Summer Street, Somerville, MA

Date Sampled: 06/26/17
Date Received: 06/26/17
Percent Solids: 81.5

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	DE18064.D	1	06/29/17 00:22	AP	06/26/17 14:15	OP49808	GDE997
Run #2							

	Initial Weight	Final Volume
Run #1	11.6 g	2.0 ml
Run #2		

CAS No.	Compound	Result	RL	Units	Q
83-32-9	Acenaphthene	ND	0.53	mg/kg	
208-96-8	Acenaphthylene	ND	0.53	mg/kg	
120-12-7	Anthracene	ND	0.53	mg/kg	
56-55-3	Benzo(a)anthracene	ND	0.53	mg/kg	
50-32-8	Benzo(a)pyrene	ND	0.53	mg/kg	
205-99-2	Benzo(b)fluoranthene	ND	0.53	mg/kg	
191-24-2	Benzo(g,h,i)perylene	ND	0.53	mg/kg	
207-08-9	Benzo(k)fluoranthene	ND	0.53	mg/kg	
218-01-9	Chrysene	ND	0.53	mg/kg	
53-70-3	Dibenz(a,h)anthracene	ND	0.53	mg/kg	
206-44-0	Fluoranthene	ND	0.53	mg/kg	
86-73-7	Fluorene	ND	0.53	mg/kg	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	0.53	mg/kg	
91-57-6	2-Methylnaphthalene	ND	0.53	mg/kg	
91-20-3	Naphthalene	ND	0.53	mg/kg	
85-01-8	Phenanthrene	ND	0.53	mg/kg	
129-00-0	Pyrene	ND	0.53	mg/kg	
	C11-C22 Aromatics (Unadj.)	ND	21	mg/kg	
	C9-C18 Aliphatics	ND	11	mg/kg	
	C19-C36 Aliphatics	ND	21	mg/kg	
	C11-C22 Aromatics	ND	21	mg/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
84-15-1	o-Terphenyl	87%		40-140%
321-60-8	2-Fluorobiphenyl	94%		40-140%
580-13-2	2-Bromonaphthalene	101%		40-140%
3386-33-2	1-Chlorooctadecane	65%		40-140%

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID: S-12 ~ 10.5'
Lab Sample ID: MC50780-4
Matrix: SO - Soil
Project: Maggiore Somerville, 343 - 351 Summer Street, Somerville, MA

Date Sampled: 06/26/17
Date Received: 06/26/17
Percent Solids: 81.5

Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Lead [a]	12.1	2.5	mg/kg	1	06/28/17	06/29/17	ANJ	SW846 6010C [1]	SW846 3050B [2]

(1) Instrument QC Batch: N:MA42328
(2) Prep QC Batch: N:MP1663

(a) Analysis performed at SGS Accutest, Dayton, NJ.

RL = Reporting Limit

Report of Analysis

Client Sample ID:	S-13 ~ 10.5'		
Lab Sample ID:	MC50780-5	**Date Sampled:**	06/26/17
Matrix:	SO - Soil	**Date Received:**	06/26/17
Method:	MADEP EPH REV 1.1 SW846 3546	**Percent Solids:**	78.5
Project:	Maggiore Somerville, 343 - 351 Summer Street, Somerville, MA		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	DE18065.D	1	06/29/17 00:50	AP	06/26/17 14:15	OP49808	GDE997
Run #2							

	Initial Weight	Final Volume
Run #1	11.4 g	2.0 ml
Run #2		

CAS No.	Compound	Result	RL	Units	Q
83-32-9	Acenaphthene	ND	0.56	mg/kg	
208-96-8	Acenaphthylene	ND	0.56	mg/kg	
120-12-7	Anthracene	ND	0.56	mg/kg	
56-55-3	Benzo(a)anthracene	ND	0.56	mg/kg	
50-32-8	Benzo(a)pyrene	ND	0.56	mg/kg	
205-99-2	Benzo(b)fluoranthene	ND	0.56	mg/kg	
191-24-2	Benzo(g,h,i)perylene	ND	0.56	mg/kg	
207-08-9	Benzo(k)fluoranthene	ND	0.56	mg/kg	
218-01-9	Chrysene	ND	0.56	mg/kg	
53-70-3	Dibenz(a,h)anthracene	ND	0.56	mg/kg	
206-44-0	Fluoranthene	ND	0.56	mg/kg	
86-73-7	Fluorene	ND	0.56	mg/kg	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	0.56	mg/kg	
91-57-6	2-Methylnaphthalene	ND	0.56	mg/kg	
91-20-3	Naphthalene	ND	0.56	mg/kg	
85-01-8	Phenanthrene	ND	0.56	mg/kg	
129-00-0	Pyrene	ND	0.56	mg/kg	
	C11-C22 Aromatics (Unadj.)	ND	22	mg/kg	
	C9-C18 Aliphatics	ND	11	mg/kg	
	C19-C36 Aliphatics	ND	22	mg/kg	
	C11-C22 Aromatics	ND	22	mg/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
84-15-1	o-Terphenyl	80%		40-140%
321-60-8	2-Fluorobiphenyl	82%		40-140%
580-13-2	2-Bromonaphthalene	57%		40-140%
3386-33-2	1-Chlorooctadecane	83%		40-140%

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	S-13 ~ 10.5'		
Lab Sample ID:	MC50780-5	**Date Sampled:**	06/26/17
Matrix:	SO - Soil	**Date Received:**	06/26/17
		Percent Solids:	78.5
Project:	Maggiore Somerville, 343 - 351 Summer Street, Somerville, MA		

Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Lead [a]	13.0	2.4	mg/kg	1	06/28/17	06/29/17	ANJ	SW846 6010C [1]	SW846 3050B [2]

(1) Instrument QC Batch: N:MA42328
(2) Prep QC Batch: N:MP1663

(a) Analysis performed at SGS Accutest, Dayton, NJ.

RL = Reporting Limit

Misc. Forms

Custody Documents and Other Forms

Includes the following where applicable:

- Chain of Custody
- MCP Form
- MCP Form (SGS Accutest New Jersey)
- EPH Form
- Sample Tracking Chronicle
- QC Evaluation: MA MCP Limits

ACCUTEST LABORATORIES

CHAIN OF CUSTODY

Accutest Laboratories of New England
495 Technology Center West, Building One
TEL 508-481-6200 FAX 508-481-7753
www.accutest.com

PAGE 1 OF 1

Accutest Quote #: | Accutest Job #: MC50780

Client / Reporting Information

Company Name: EnviroTrac Ltd.
Street Address: 2 Merchant St. 02067
City, State, Zip: Sharon, MA
Project Contact, E-mail: D. Tomassi dtomassi@envirotrac.com
Phone #: 781-793-0074
Sampler(s) Name(s), Phone #: L. Main

Project Information

Project Name: Maggiore Somerville
Street: 343-351 Summer St.
City: Somerville, MA
Project #: 03.990202.01
Client PO#:
Project Manager: D. Tomassi

Billing Information (if different from Report to)

Company Name:
Street Address:
City, State, Zip:
Attention, PO#:

Requested Analysis (see TEST CODE sheet)

Matrix Codes: DW Drinking Water; GW Ground Water; WW Water; SW Surface Water; SO Soil; SL Sludge; SED Sediment; OI Oil; LIQ Other Liquid; AIR Air; SOL Other Solid; WP Wipe; FB Field Blank; EB Equipment Blank; RB Rinse Blank; TB Trip Blank

Accutest Sample #	Field ID / Point of Collection	MEOH/DI Vial #	Collection Date	Collection Time	Sampled by	Matrix	# of bottles	Number of preserved Bottles: NO	HCl	MeOH	HNO3	H2SO4	NaOH	ZN Ac+NaOH	MeOH	ENCORE	Bisulfate	EPH w/ PAHs	Pb	LAB USE ONLY
-1	S-9 ~10.5'		6/26/17	12:55	LM	So	1						1					X	X	
-2	S-10 ~10.5'			13:51			1						1					X	X	
-3	S-11 ~10.5'			13:03			1						1					X	X	
-4	S-12 ~10.5'			13:05			1						1					X	X	
-5	S-13 ~10.5'			13:07			1						1					X	X	

INITIAL ASESSMENT: CAP
LABEL VERIFICATION: DS

Turnaround Time (Business days)

- Std. 10 Business Days
- Std. 5 Business Days (By Contract only)
- 8 Day RUSH
- 3 Day EMERGENCY
- 2 Day EMERGENCY
- 1 Day EMERGENCY

Emergency & Rush T/A data available VIA Lablink

Approved By (Accutest PM) / Date:

RUSH!

Data Deliverable Information

- Commercial "A" (Level 1)
- Commercial "B" (Level 2)
- FULLT1 (Level 3+4)
- CT RCP
- MA MCP
- NYASP Category A
- NYASP Category B
- State Forms
- EDD Format
- Other

Commercial "A" = Results Only
Commercial "B" = Results + QC Summary

Comments / Special Instructions

Must meet RCS-1 standards

Sample Custody must be documented below each time samples change possession, including courier delivery

	Relinquished by Sampler	Date Time	Received By	Relinquished By	Date Time	Received By
1		6/26/17 13:55				
2					6/27/17 1445	
3						
4						
5						

Custody Seal #: Intact / Not Intact — Preserved where applicable — On Ice — Cooler Temp: 2.9°C

SGS Accutest NE Sample Receipt Summary

Job Number: MC50780 Client: ENVIROTRAC Project: MAGGIORE SOMERVILLE

Date / Time Received: 6/26/2017 2:45:00 PM Delivery Method: SGS Courier Airbill #'s:

Cooler Temps (Initial/Adjusted) #[illegible]

Cooler Security	Y	or	N		Y	or	N
1 Custody Seals Present	☐		☑	3 COC Present	☑		☐
2 Custody Seals Intact	☐		☑	4 Smpl Dates/Time OK	☑		☐

Cooler Temperature	Y	or	N
1 Temp criteria achieved	☑		☐
2 Thermometer ID	IRGUN1,		
3 Cooler media	Ice (Bag)		
4 No Coolers	1		

Quality Control Preservation	Y	or	N	N/A
1 Trip Blank present / cooler	☐		☐	☑
2 Trip Blank listed on COC	☐		☐	☑
3 Samples preserved properly	☑		☐	
4 VOCs headspace free	☐		☐	☑

Sample Integrity - Documentation	Y	or	N
1. Sample labels present on bottles	☑		☐
2 Container labeling complete	☑		☐
3 Sample container label / COC agree	☑		☐

Sample Integrity - Condition	Y	or	N
1. Sample recvd within HT	☑		☐
2 All containers accounted for	☑		☐
3 Condition of sample	Intact		

Sample Integrity - Instructions	Y	or	N	N/A
1. Analysis requested is clear	☑		☐	
2 Bottles received for unspecified tests	☐		☑	
3. Sufficient volume recvd for analysis	☑		☐	
4 Compositing instructions clear	☐		☐	☑
5 Filtering instructions clear	☐		☐	☑

Comments

5.1

MC50780: Chain of Custody
Page 2 of 2

Massachusetts Department of Environmental Protection Bureau of Waste Site Cleanup	WSC-CAM	Exhibit VII A
	July 1 2010	Revision No 1
	Final	

Exhibit VII A-2: MassDEP Analytical Protocol Certification Form

MassDEP Analytical Protocol Certification Form

Laboratory Name	SGS Accutest- Marlborough	Project #	MC50780
Project Location:	Maggiore Somerville, 343 - 351 Summer Street, Somerville, MA	MADEP RTN	None

This form provides certifications for the following data set: list Laboratory Sample ID Numbers(s)
MC50780-1,MC50780-2,MC50780-3,MC50780-4,MC50780-5

Matrices: Groundwater/Surface Water ( ) Soil/Sediment (X) Drinking Water ( ) Air ( ) Other ( )

CAM Protocol (check all that apply below)

8260 VOC ( ) CAM IIA	7470/7471 Hg ( ) CAM III B	MassDEP VPH ( ) CAM IV A	8081 Pesticides ( ) CAM V B	7196 Hex Cr ( ) CAM VI B	Mass DEP APH ( ) CAM IX A
8270 SVOC ( ) CAM II B	7010 Metals ( ) CAM III C	MassDEP EPH (X) CAM IV B	8151 Herbicides ( ) CAM V C	8330 Explosives ( ) CAM VIII A	TO-15 VOC ( ) CAM IX B
6010 Metals (X) CAM III A	6020 Metals ( ) CAM III D	8082 PCB ( ) CAM V A	9014 Total Cyanide/PAC CAM VI A	6860 Perchlorate ( ) CAM VIII B	

Affirmative Responses to Questions A Through F are required for "Presumptive Certainty status

A	Were all samples received in a condition consistent with those described on the Chain-of Custody, properly preserved (including temperature) in the field or laboratory, and prepared/analyzed within method holding times?	☑ Yes	☐ No
B	Were the analytical method(s) and all associated QC requirements specified in the selected CAM protocol(s) followed?	☑ Yes	☐ No
C	Were all required corrective actions and analytical response actions specified in the selected CAM protocol(s) implemented for all identified performance standard non-conformances?	☑ Yes	☐ No
D	Does the laboratory report comply with all the reporting requirements specified in CAM VII A, "Quality Assurance and Quality Control Guidelines for the Acquisition and Reporting of Analytical Data"?	☑ Yes	☐ No
E	VPH, EPH, APH, and TO-15 only: a. VPH, EPH, and APH Methods only: Was each method conducted without significant modification(s)? (Refer to the individual method(s) for a list of significant modifications). b. APH and TO-15 Methods only: Was the complete analyte list reported for each method?	☑ Yes ☐ Yes	☐ No ☐ No
F	Were all applicable CAM protocol QC and performance standard non-conformances identified and evaluated in a laboratory narrative (including all "No" responses to Questions A through E)?	☑ Yes	☐ No

Responses to questions G, H, and I below is required for "Presumptive Certainty" status

G	Were the reporting limits at or below all CAM reporting limits specified in the selected CAM protocols	☑ Yes	☐ No
	Data User Note: Data that achieve "Presumptive Certainty" status may not necessarily meet the data useability and representativeness requirements described in 310 CMR 40.1056(2)(k) and WSC-07-350.		
H	Were all QC performance standards specified in the CAM protocol(s) achieved?	☑ Yes	☐ No
I	Were results reported for the complete analyte list specified in the selected CAM protocol(s)?	☐ Yes	☑ No

All Negative responses must be addressed in an attached Environmental Laboratory case narrative.

I the undersigned, attest under the pains and penalties of perjury that, based upon my personal inquiry of those responsible for obtaining the information, the material contained in this analytical report is, to the best of my knowledge and belief, accurate and complete.

Signature: [signature] Position: Laboratory Director

Printed Name: H. (Brad) Madadian Date: 03-Jul-17

5.2

Massachusetts Department of Environmental Protection Bureau of Waste Site Cleanup	WSC-CAM	Exhibit VII A
	July 1, 2010	Revision No 1
	Final	

Exhibit VII A-2: MassDEP Analytical Protocol Certification Form

MassDEP Analytical Protocol Certification Form

Laboratory Name	Accutest Mid-Atlantic	Project #	MC50780
Project Location:#01074,	ENVTRAC: Maggiore Somerville, 343 - 351 Summer Street, Somerville, MA	MADEP RTN	None

This form provides certifications for the following data set: list Laboratory Sample ID Numbers(s)
MC50780-1,MC50780-2,MC50780-3,MC50780-4,MC50780-5

Matrices: Groundwater/Surface Water ( ) Soil/Sediment (X) Drinking Water ( ) Air ( ) Other ( )

CAM Protocol (check all that apply below)

8260 VOC ( ) CAM II A	7470/7471 Hg ( ) CAM III B	MassDEP VPH ( ) CAM IV A	8081 Pesticides ( ) CAM V B	7196 Hex Cr ( ) CAM VI B	Mass DEP APH ( ) CAM IX A
8270 SVOC ( ) CAM II B	7010 Metals ( ) CAM III C	MassDEP EPH ( ) CAM IV B	8151 Herbicides ( ) CAM V C	8330 Explosives ( ) CAM VIII A	TO-15 VOC ( ) CAM IX B
6010 Metals (X) CAM III A	6020 Metals ( ) CAM III D	8082 PCB ( ) CAM V A	9014 Total Cyanide/PAC ( ) CAM VI A	6860 Perchlorate ( ) CAM VIII B	

Affirmative Responses to Questions A Through F are required for "Presumptive Certainty status

A	Were all samples received in a condition consistent with those described on the Chain-of Custody, properly preserved (including temperature) in the field or laboratory, and prepared/analyzed within method holding times?	☑ Yes	☐ No
B	Were the analytical method(s) and all associated QC requirements specified in the selected CAM protocol(s) followed?	☑ Yes	☐ No
C	Were all required corrective actions and analytical response actions specified in the selected CAM protocol(s) implemented for all identified performance standard non-conformances?	☑ Yes	☐ No
D	Does the laboratory report comply with all the reporting requirements specified in CAM VII A, "Quality Assurance and Quality Control Guidelines for the Acquisition and Reporting of Analytical Data"?	☑ Yes	☐ No
E	VPH, EPH, APH, and TO-15 only a. VPH, EPH, and APH Methods only: Was each method conducted without significant modification(s)? (Refer to the individual method(s) for a list of significant modifications). b. APH and TO-15 Methods only: Was the complete analyte list reported for each method?	☐ Yes ☐ Yes	☐ No ☐ No
F	Were all applicable CAM protocol QC and performance standard non-conformances identified and evaluated in a laboratory narrative (including all "No" responses to Questions A through E)?	☑ Yes	☐ No

Responses to questions G, H, and I below is required for "Presumptive Certainty" status

G	Were the reporting limits at or below all CAM reporting limits specified in the selected CAM protocols	☑ Yes	☐ No
	Data User Note: Data that achieve "Presumptive Certainty" status may not necessarily meet the data useability and representativeness requirements described in 310 CMR 40.1056(2)(k) and WSC-07-350.		
H	Were all QC performance standards specified in the CAM protocol(s) achieved?	☑ Yes	☐ No
I	Were results reported for the complete analyte list specified in the selected CAM protocol(s)?	☐ Yes	☑ No

All Negative responses must be addressed in an attached Environmental Laboratory case narrative.

I the undersigned, attest under the pains and penalties of perjury that, based upon my personal inquiry of those responsible for obtaining the information, the material contained in this analytical report is, to the best of my knowledge and belief, accurate and complete.

Signature: Nancy F. Cole Position: Laboratory Director

Printed Name: Nancy F. Cole Date: 03-Jul-17

MADEP EPH FORM

Matrix	Aqueous ☐	Soil ☑	Sediment ☐	Other ☐		
Containers	Satisfactory ☑	Broken ☐	Leaking ☐			
Aqueous Preservatives	N/A ☑	pH <= 2 ☐	pH > 2 ☐			
Temperature	Received on Ice ☐	Received at 4 Deg. C ☐	Other ☑	Rec'd at 2 3 Deg C		
Extraction Method	SW846 3546					

Method for Ranges:	MADEP EPH REV 1.1	Client ID: S-9 ~10.5'		Lab ID: MC50780-1	
Method for Targets:	MADEP EPH REV 1.1	Date Collected: 6/26/2017		Date Received: 6/26/2017	
EPH Surrogate Stds.	Aliphatic 1-Chlorooctadecane Aromatic o-Terphenyl	Date Extracted: 6/26/2017 2:15:00 PM	First Date Run: 6/28/2017	Last Date Run: N/A	
EPH Fractionation Surrogate Standards.	2-Fluorobiphenyl 2-Bromonaphthalene	% Solids: 79.4	Low Dilution: 1	High Dilution: N/A	

Unadjusted Ranges	CAS #	Units	Result	RDL	Q
C11-C22 Aromatics (Unadj.)		mg/kg	81 A	22	
Diesel PAH Analytes					
2-Methylnaphthalene	91-57-6	mg/kg	1.39	0.54	
Phenanthrene	85-01-8	mg/kg	ND	0.54	
Acenaphthene	83-32-9	mg/kg	ND	0.54	
Naphthalene	91-20-3	mg/kg	ND	0.54	
Other Target PAH Analytes					
Acenaphthylene	208-96-8	mg/kg	ND	0.54	
Anthracene	120-12-7	mg/kg	ND	0.54	
Benzo(a)anthracene	56-55-3	mg/kg	ND	0.54	
Benzo(a)pyrene	50-32-8	mg/kg	ND	0.54	
Benzo(b)fluoranthene	205-99-2	mg/kg	ND	0.54	
Benzo(g,h,i)perylene	191-24-2	mg/kg	ND	0.54	
Benzo(k)fluoranthene	207-08-9	mg/kg	ND	0.54	
Chrysene	218-01-9	mg/kg	ND	0.54	
Dibenz(a,h)anthracene	53-70-3	mg/kg	ND	0.54	
Fluoranthene	206-44-0	mg/kg	ND	0.54	
Fluorene	86-73-7	mg/kg	ND	0.54	
Indeno(1,2,3-cd)pyrene	193-39-5	mg/kg	ND	0.54	
Pyrene	129-00-0	mg/kg	ND	0.54	
Adjusted Ranges					
C9-C18 Aliphatics		mg/kg	188 A	11	
C19-C36 Aliphatics		mg/kg	ND A	22	
C11-C22 Aromatics		mg/kg	79.3 B	22	
Surrogate Recoveries				**Acceptance Range**	
1-Chlorooctadecane		%	72	40-140 %	
o-Terphenyl		%	88	40-140 %	
2-Fluorobiphenyl		%	98	40-140 %	
2-Bromonaphthalene		%	96	40-140 %	

Footnotes

A Hydrocarbon Range data exclude concentrations of any surrogate(s) and/or internal standards eluting in that range

B Hydrocarbon Range data exclude concentrations of any surrogate(s) and/or internal standards eluting in that range. C11-C22 Aromatic Hydrocarbons exclude the concentration of Target PAH Analytes

Z A 'J' qualifier indicates an estimated value

Were all QA/QC procedures REQUIRED by the EPH Method followed? ☑ Yes ☐ No- Details Attatched

Were all performance/acceptance standards for required QA/QC procedures achieved? ☑ Yes ☐ No- Details Attatched

Were any significant modifications made to the EPH method, as specified in Sect. 11.3? ☑ No ☐ Yes- Details Attatched

I attest under the pains and penalties of perjury that, based upon my inquiry of those individuals immediately responsible for obtainig the information, the material contained in this report is, to the best of my knowledge and belief, accurate and complete.

Signature: H. (Brad) Madadian Postition: Laboratory Director

Printed Name: H. (Brad) Madadian Date: 7/3/2017

MADEP EPH FORM

Matrix	Aqueous	Soil ✓	Sediment	Other	
Containers	Satisfactory ✓	Broken	Leaking		
Aqueous Preservatives	N/A ✓	pH <= 2	pH > 2		
Temperature	Received on Ice	Received at 4 Deg. C	Other ✓	Rec'd at 2 3 Deg C	
Extraction Method	SW846 3546				

Method for Ranges:	MADEP EPH REV 1.1	Client ID: S-10 ~10.5'		Lab ID: MC50780-2	
Method for Targets:	MADEP EPH REV 1.1	Date Collected: 6/26/2017		Date Received: 6/26/2017	
EPH Surrogate Stds.	Aliphatic 1-Chlorooctadecane Aromatic o-Terphenyl	Date Extracted: 6/26/2017 2:15:00 PM	First Date Run: 6/28/2017	Last Date Run: N/A	
EPH Fractionation Surrogate Standards.	2-Fluorobiphenyl 2-Bromonaphthalene	% Solids: 79 5	Low Dilution: 1	High Dilution: N/A	

Unadjusted Ranges	CAS #	Units	Result	RDL	Q
C11-C22 Aromatics (Unadj)		mg/kg	ND [A]	21	
Diesel PAH Analytes					
2-Methylnaphthalene	91-57-6	mg/kg	ND	0.53	
Phenanthrene	85-01-8	mg/kg	ND	0.53	
Acenaphthene	83-32-9	mg/kg	ND	0.53	
Naphthalene	91-20-3	mg/kg	ND	0.53	
Other Target PAH Analytes					
Acenaphthylene	208-96-8	mg/kg	ND	0.53	
Anthracene	120-12-7	mg/kg	ND	0.53	
Benzo(a)anthracene	56-55-3	mg/kg	ND	0.53	
Benzo(a)pyrene	50-32-8	mg/kg	ND	0.53	
Benzo(b)fluoranthene	205-99-2	mg/kg	ND	0.53	
Benzo(g,h,i)perylene	191-24-2	mg/kg	ND	0.53	
Benzo(k)fluoranthene	207-08-9	mg/kg	ND	0.53	
Chrysene	218-01-9	mg/kg	ND	0.53	
Dibenz(a,h)anthracene	53-70-3	mg/kg	ND	0 53	
Fluoranthene	206-44-0	mg/kg	ND	0.53	
Fluorene	86-73-7	mg/kg	ND	0.53	
Indeno(1,2,3-cd)pyrene	193-39-5	mg/kg	ND	0.53	
Pyrene	129-00-0	mg/kg	ND	0.53	
Adjusted Ranges					
C9-C18 Aliphatics		mg/kg	ND [A]	11	
C19-C36 Aliphatics		mg/kg	ND [A]	21	
C11-C22 Aromatics		mg/kg	ND [B]	21	
Surrogate Recoveries				Acceptance Range	
1-Chlorooctadecane		%	74	40-140 %	
o-Terphenyl		%	96	40-140 %	
2-Fluorobiphenyl		%	109	40-140 %	
2-Bromonaphthalene		%	121	40-140 %	

Footnotes

A Hydrocarbon Range data exclude concentrations of any surrogate(s) and/or internal standards eluting in that range

B Hydrocarbon Range data exclude concentrations of any surrogate(s) and/or internal standards eluting in that range C11-C22 Aromatic Hydrocarbons exclude the concentration of Target PAH Analytes

Z A 'J' qualifier indicates an estimated value

Were all QA/QC procedures REQUIRED by the EPH Method followed? ✓ Yes No- Details Attatched

Were all performance/acceptance standards for required QA/QC procedures achieved? ✓ Yes No- Details Attatched

Were any significant modifications made to the EPH method, as specified in Sect. 11.3? ✓ No Yes- Details Attatched

I attest under the pains and penalties of perjury that, based upon my inquiry of those individuals immediately responsible for obtainig the information, the material contained in this report is, to the best of my knowledge and belief, accurate and complete.

Signature _____ Postition Laboratory Director

Printed Name H. (Brad) Madadian Date 7/3/2017

5.4

MADEP EPH FORM

Matrix	Aqueous	Soil ✓	Sediment	Other	
Containers	Satisfactory ✓	Broken	Leaking		
Aqueous Preservatives	N/A ✓	pH <= 2	pH > 2		
Temperature	Received on Ice	Received at 4 Deg. C	Other ✓	Rec'd at 2 3 Deg C	
Extraction Method	SW846 3546				

Method for Ranges:	MADEP EPH REV 1.1	Client ID: S-11 ~10 5'		Lab ID: MC50780-3	
Method for Targets:	MADEP EPH REV 1.1	Date Collected: 6/26/2017		Date Received: 6/26/2017	
EPH Surrogate Stds.	Aliphatic 1-Chlorooctadecane Aromatic o-Terphenyl	Date Extracted: 6/26/2017 2:15:00 PM	First Date Run: 6/28/2017	Last Date Run: N/A	
EPH Fractionation Surrogate Standards.	2-Fluorobiphenyl 2-Bromonaphthalene	% Solids: 77.4	Low Dilution: 1	High Dilution: N/A	

Unadjusted Ranges	CAS #	Units	Result	RDL	Q
C11-C22 Aromatics (Unadj)		mg/kg	ND [A]	22	
Diesel PAH Analytes					
2-Methylnaphthalene	91-57-6	mg/kg	ND	0.54	
Phenanthrene	85-01-8	mg/kg	ND	0.54	
Acenaphthene	83-32-9	mg/kg	ND	0.54	
Naphthalene	91-20-3	mg/kg	ND	0.54	
Other Target PAH Analytes					
Acenaphthylene	208-96-8	mg/kg	ND	0.54	
Anthracene	120-12-7	mg/kg	ND	0.54	
Benzo(a)anthracene	56-55-3	mg/kg	ND	0.54	
Benzo(a)pyrene	50-32-8	mg/kg	ND	0.54	
Benzo(b)fluoranthene	205-99-2	mg/kg	ND	0.54	
Benzo(g,h,i)perylene	191-24-2	mg/kg	ND	0.54	
Benzo(k)fluoranthene	207-08-9	mg/kg	ND	0.54	
Chrysene	218-01-9	mg/kg	ND	0 54	
Dibenz(a,h)anthracene	53-70-3	mg/kg	ND	0.54	
Fluoranthene	206-44-0	mg/kg	ND	0.54	
Fluorene	86-73-7	mg/kg	ND	0.54	
Indeno(1,2,3-cd)pyrene	193-39-5	mg/kg	ND	0.54	
Pyrene	129-00-0	mg/kg	ND	0.54	
Adjusted Ranges					
C9-C18 Aliphatics		mg/kg	ND [A]	11	
C19-C36 Aliphatics		mg/kg	ND [A]	22	
C11-C22 Aromatics		mg/kg	ND [B]	22	
Surrogate Recoveries				Acceptance Range	
1-Chlorooctadecane		%	52	40-140 %	
o-Terphenyl		%	93	40-140 %	
2-Fluorobiphenyl		%	101	40-140 %	
2-Bromonaphthalene		%	113	40-140 %	

Footnotes

A Hydrocarbon Range data exclude concentrations of any surrogate(s) and/or internal standards eluting in that range

B Hydrocarbon Range data exclude concentrations of any surrogate(s) and/or internal standards eluting in that range C11-C22 Aromatic Hydrocarbons exclude the concentration of Target PAH Analytes

Z A 'J' qualifier indicates an estimated value

Were all QA/QC procedures REQUIRED by the EPH Method followed? ✓ Yes No- Details Attatched

Were all performance/acceptance standards for required QA/QC procedures achieved? ✓ Yes No- Details Attatched

Were any significant modifications made to the EPH method, as specified in Sect. 11.3? ✓ No Yes- Details Attatched

I attest under the pains and penalties of perjury that, based upon my inquiry of those individuals immediately responsible for obtainig the information, the material contained in this report is, to the best of my knowledge and belief, accurate and complete.

Signature _____ Postition Laboratory Director

Printed Name H. (Brad) Madadian Date 7/3/2017

5.4

MADEP EPH FORM

Matrix	Aqueous	Soil ☑	Sediment	Other	
Containers	Satisfactory ✓	Broken	Leaking		
Aqueous Preservatives	N/A ✓	pH <= 2	pH > 2		
Temperature	Received on Ice	Received at 4 Deg. C	Other ☑	Rec'd at 2.3 Deg. C	
Extraction Method	SW846 3546				

Method for Ranges:	MADEP EPH REV 1.1	Client ID: S-12 ~10.5'		Lab ID:	MC50780-4
Method for Targets:	MADEP EPH REV 1.1	Date Collected: 6/26/2017		Date Received:	6/26/2017
EPH Surrogate Stds.	Aliphatic. 1-Chlorooctadecane	Date Extracted:	First Date Run:		Last Date Run:
	Aromatic o-Terphenyl	6/26/2017 2:15:00 PM	6/29/2017		N/A
EPH Fractionation	2-Fluorobiphenyl	% Solids:	Low Dilution:		High Dilution:
Surrogate Standards.	2-Bromonaphthalene	81.5	1		N/A

Unadjusted Ranges	CAS #	Units	Result	RDL	Q
C11-C22 Aromatics (Unadj.)		mg/kg	ND [A]	21	
Diesel PAH Analytes					
2-Methylnaphthalene	91-57-6	mg/kg	ND	0.53	
Phenanthrene	85-01-8	mg/kg	ND	0.53	
Acenaphthene	83-32-9	mg/kg	ND	0.53	
Naphthalene	91-20-3	mg/kg	ND	0.53	
Other Target PAH Analytes					
Acenaphthylene	208-96-8	mg/kg	ND	0.53	
Anthracene	120-12-7	mg/kg	ND	0.53	
Benzo(a)anthracene	56-55-3	mg/kg	ND	0.53	
Benzo(a)pyrene	50-32-8	mg/kg	ND	0.53	
Benzo(b)fluoranthene	205-99-2	mg/kg	ND	0.53	
Benzo(g,h,i)perylene	191-24-2	mg/kg	ND	0.53	
Benzo(k)fluoranthene	207-08-9	mg/kg	ND	0.53	
Chrysene	218-01-9	mg/kg	ND	0.53	
Dibenz(a,h)anthracene	53-70-3	mg/kg	ND	0.53	
Fluoranthene	206-44-0	mg/kg	ND	0.53	
Fluorene	86-73-7	mg/kg	ND	0.53	
Indeno(1,2,3-cd)pyrene	193-39-5	mg/kg	ND	0.53	
Pyrene	129-00-0	mg/kg	ND	0.53	
Adjusted Ranges					
C9-C18 Aliphatics		mg/kg	ND [A]	11	
C19-C36 Aliphatics		mg/kg	ND [A]	21	
C11-C22 Aromatics		mg/kg	ND [B]	21	

Surrogate Recoveries			Acceptance Range
1-Chlorooctadecane	%	65	40-140 %
o-Terphenyl	%	87	40-140 %
2-Fluorobiphenyl	%	94	40-140 %
2-Bromonaphthalene	%	101	40-140 %

Footnotes

A Hydrocarbon Range data exclude concentrations of any surrogate(s) and/or internal standards eluting in that range

B Hydrocarbon Range data exclude concentrations of any surrogate(s) and/or internal standards eluting in that range. C11-C22 Aromatic Hydrocarbons exclude the concentration of Target PAH Analytes

Z A 'J' qualifier indicates an estimated value

Were all QA/QC procedures REQUIRED by the EPH Method followed? ☑ Yes ☐ No- Details Attatched

Were all performance/acceptance standards for required QA/QC procedures achieved? ☑ Yes ☐ No- Details Attatched

Were any significant modifications made to the EPH method, as specified in Sect. 11.3? ☑ No ☐ Yes- Details Attatched

I attest under the pains and penalties of perjury that, based upon my inquiry of those individuals immediately responsible for obtainig the information, the material contained in this report is, to the best of my knowledge and belief, accurate and complete.

Signature _____ Postition Laboratory Director

Printed Name H. (Brad) Madadian Date 7/3/2017

5.4

5

MADEP EPH FORM

Matrix	Aqueous	Soil ☑	Sediment	Other	
Containers	Satisfactory ✓	Broken	Leaking		
Aqueous Preservatives	N/A ✓	pH <= 2	pH > 2		
Temperature	Received on Ice	Received at 4 Deg. C	Other ☑	Rec'd at 2.3 Deg. C	
Extraction Method	SW846 3546				

Method for Ranges:	MADEP EPH REV 1.1	Client ID: S-13 ~10.5'		Lab ID:	MC50780-5
Method for Targets:	MADEP EPH REV 1.1	Date Collected: 6/26/2017		Date Received:	6/26/2017
EPH Surrogate Stds.	Aliphatic 1-Chlorooctadecane	Date Extracted:	First Date Run:		Last Date Run:
	Aromatic o-Terphenyl	6/26/2017 2:15:00 PM	6/29/2017		N/A
EPH Fractionation	2-Fluorobiphenyl	% Solids:	Low Dilution:		High Dilution:
Surrogate Standards.	2-Bromonaphthalene	78.5	1		N/A

Unadjusted Ranges	CAS #	Units	Result	RDL	Q
C11-C22 Aromatics (Unadj.)		mg/kg	ND [A]	22	
Diesel PAH Analytes					
2-Methylnaphthalene	91-57-6	mg/kg	ND	0.56	
Phenanthrene	85-01-8	mg/kg	ND	0.56	
Acenaphthene	83-32-9	mg/kg	ND	0.56	
Naphthalene	91-20-3	mg/kg	ND	0.56	
Other Target PAH Analytes					
Acenaphthylene	208-96-8	mg/kg	ND	0.56	
Anthracene	120-12-7	mg/kg	ND	0.56	
Benzo(a)anthracene	56-55-3	mg/kg	ND	0.56	
Benzo(a)pyrene	50-32-8	mg/kg	ND	0.56	
Benzo(b)fluoranthene	205-99-2	mg/kg	ND	0.56	
Benzo(g,h,i)perylene	191-24-2	mg/kg	ND	0.56	
Benzo(k)fluoranthene	207-08-9	mg/kg	ND	0.56	
Chrysene	218-01-9	mg/kg	ND	0.56	
Dibenz(a,h)anthracene	53-70-3	mg/kg	ND	0.56	
Fluoranthene	206-44-0	mg/kg	ND	0.56	
Fluorene	86-73-7	mg/kg	ND	0.56	
Indeno(1,2,3-cd)pyrene	193-39-5	mg/kg	ND	0.56	
Pyrene	129-00-0	mg/kg	ND	0.56	
Adjusted Ranges					
C9-C18 Aliphatics		mg/kg	ND [A]	11	
C19-C36 Aliphatics		mg/kg	ND [A]	22	
C11-C22 Aromatics		mg/kg	ND [B]	22	

Surrogate Recoveries			Acceptance Range
1-Chlorooctadecane	%	83	40-140 %
o-Terphenyl	%	80	40-140 %
2-Fluorobiphenyl	%	82	40-140 %
2-Bromonaphthalene	%	57	40-140 %

Footnotes

A Hydrocarbon Range data exclude concentrations of any surrogate(s) and/or internal standards eluting in that range

B Hydrocarbon Range data exclude concentrations of any surrogate(s) and/or internal standards eluting in that range. C11-C22 Aromatic Hydrocarbons exclude the concentration of Target PAH Analytes

Z A 'J' qualifier indicates an estimated value

Were all QA/QC procedures REQUIRED by the EPH Method followed? ☑ Yes ☐ No- Details Attatched

Were all performance/acceptance standards for required QA/QC procedures achieved? ☑ Yes ☐ No- Details Attatched

Were any significant modifications made to the EPH method, as specified in Sect. 11.3? ☑ No ☐ Yes- Details Attatched

I attest under the pains and penalties of perjury that, based upon my inquiry of those individuals immediately responsible for obtainig the information, the material contained in this report is, to the best of my knowledge and belief, accurate and complete.

Signature _____ Postition Laboratory Director

Printed Name H. (Brad) Madadian Date 7/3/2017

5.4

5

Internal Sample Tracking Chronicle

Enviro Trac, Ltd.

Maggiore Somerville, 343 - 351 Summer Street, Somerville, MA
Project No: 03.990202.00

Job No: MC50780

Sample Number	Method	Analyzed	By	Prepped	By	Test Codes
MC50780-1	Collected: 26-JUN-17 12:55 By: LM	Received: 26-JUN-17 By: TF				
S-9 ~ 10.5'						
MC50780-1	SM 2540G-97 MOD	28-JUN-17	EAL			SOL104
MC50780-1	MADEP EPH REV 1.1	28-JUN-17 22:58	AP	26-JUN-17	AJ	BMAEPH
MC50780-1	SW846 6010C	29-JUN-17 01:38	ANJ	28-JUN-17	ANJ	PB
MC50780-2	Collected: 26-JUN-17 13:51 By: LM	Received: 26-JUN-17 By: TF				
S-10 ~ 10.5'						
MC50780-2	SM 2540G-97 MOD	28-JUN-17	EAL			SOL104
MC50780-2	MADEP EPH REV 1.1	28-JUN-17 23:26	AP	26-JUN-17	AJ	BMAEPH
MC50780-2	SW846 6010C	29-JUN-17 01:41	ANJ	28-JUN-17	ANJ	PB
MC50780-3	Collected: 26-JUN-17 13:03 By: LM	Received: 26-JUN-17 By: TF				
S-11 ~ 10.5'						
MC50780-3	SM 2540G-97 MOD	28-JUN-17	EAL			SOL104
MC50780-3	MADEP EPH REV 1.1	28-JUN-17 23:54	AP	26-JUN-17	AJ	BMAEPH
MC50780-3	SW846 6010C	29-JUN-17 14:42	ANJ	28-JUN-17	ANJ	PB
MC50780-4	Collected: 26-JUN-17 13:05 By: LM	Received: 26-JUN-17 By: TF				
S-12 ~ 10.5'						
MC50780-4	SM 2540G-97 MOD	28-JUN-17	EAL			SOL104
MC50780-4	MADEP EPH REV 1.1	29-JUN-17 00:22	AP	26-JUN-17	AJ	BMAEPH
MC50780-4	SW846 6010C	29-JUN-17 01:47	ANJ	28-JUN-17	ANJ	PB
MC50780-5	Collected: 26-JUN-17 13:07 By: LM	Received: 26-JUN-17 By: TF				
S-13 ~ 10.5'						
MC50780-5	SM 2540G-97 MOD	28-JUN-17	EAL			SOL104
MC50780-5	MADEP EPH REV 1.1	29-JUN-17 00:50	AP	26-JUN-17	AJ	BMAEPH
MC50780-5	SW846 6010C	29-JUN-17 01:50	ANJ	28-JUN-17	ANJ	PB

QC Evaluation: MA MCP Limits

Job Number: MC50780
Account: EnviroTrac, Ltd.
Project: Maggiore Somerville, 343 - 351 Summer Street, Somerville, MA
Collected: 06/26/17

QC Sample ID	CAS#	Analyte	Sample Type	Result Type	Result	Units	Limits

No Exceptions found.

* Sample used for QC is not from job MC50780

GC Semi-volatiles

QC Data Summaries

Includes the following where applicable:

- Method Blank Summaries
- Blank Spike Summaries
- Matrix Spike and Duplicate Summaries
- Surrogate Recovery Summaries

Method Blank Summary

Job Number: MC50780
Account: ENVTRAC EnviroTrac, Ltd.
Project: Maggiore Somerville, 343 - 351 Summer Street, Somerville, MA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP49808-MB	DE18048.D	1	06/28/17	AP	06/26/17	OP49808	GDE997

The QC reported here applies to the following samples: **Method:** MADEP EPH REV 1.1

MC50780-1, MC50780-2, MC50780-3, MC50780-4, MC50780-5

CAS No.	Compound	Result	RL	Units	Q
83-32-9	Acenaphthene	ND	450	ug/kg	
208-96-8	Acenaphthylene	ND	450	ug/kg	
120-12-7	Anthracene	ND	450	ug/kg	
56-55-3	Benzo(a)anthracene	ND	450	ug/kg	
50-32-8	Benzo(a)pyrene	ND	450	ug/kg	
205-99-2	Benzo(b)fluoranthene	ND	450	ug/kg	
191-24-2	Benzo(g,h,i)perylene	ND	450	ug/kg	
207-08-9	Benzo(k)fluoranthene	ND	450	ug/kg	
218-01-9	Chrysene	ND	450	ug/kg	
53-70-3	Dibenz(a,h)anthracene	ND	450	ug/kg	
206-44-0	Fluoranthene	ND	450	ug/kg	
86-73-7	Fluorene	ND	450	ug/kg	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	450	ug/kg	
91-57-6	2-Methylnaphthalene	ND	450	ug/kg	
91-20-3	Naphthalene	ND	450	ug/kg	
85-01-8	Phenanthrene	ND	450	ug/kg	
129-00-0	Pyrene	ND	450	ug/kg	
	C11-C22 Aromatics (Unadj.)	ND	18000	ug/kg	
	C9-C18 Aliphatics	ND	9100	ug/kg	
	C19-C36 Aliphatics	ND	18000	ug/kg	
	C11-C22 Aromatics	ND	18000	ug/kg	

CAS No.	Surrogate Recoveries		Limits
84-15-1	o-Terphenyl	71%	40-140%
321-60-8	2-Fluorobiphenyl	84%	40-140%
580-13-2	2-Bromonaphthalene	91%	40-140%
3386-33-2	1-Chlorooctadecane	49%	40-140%

Blank Spike/Blank Spike Duplicate Summary

Job Number: MC50780
Account: ENVTRAC EnviroTrac, Ltd.
Project: Maggiore Somerville, 343 - 351 Summer Street, Somerville, MA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP49808-BS	DE18057.D	1	06/28/17	AP	06/26/17	OP49808	GDE997
OP49808-BSD	DE18047.D	1	06/28/17	AP	06/26/17	OP49808	GDE997

The QC reported here applies to the following samples: **Method:** MADEP EPH REV 1.1

MC50780-1, MC50780-2, MC50780-3, MC50780-4, MC50780-5

CAS No.	Compound	Spike ug/kg	BSP ug/kg	BSP %	BSD ug/kg	BSD %	RPD	Limits Rec/RPD
83-32-9	Acenaphthene	4550	3000	66	3310	73	10	40-140/25
208-96-8	Acenaphthylene	4550	2770	61	2910	64	5	40-140/25
120-12-7	Anthracene	4550	3280	72	3630	80	10	40-140/25
56-55-3	Benzo(a)anthracene	4550	3550	78	3890	86	9	40-140/25
50-32-8	Benzo(a)pyrene	4550	3730	82	4030	89	8	40-140/25
205-99-2	Benzo(b)fluoranthene	4550	3830	84	4180	92	9	40-140/25
191-24-2	Benzo(g,h,i)perylene	4550	4130	91	4480	99	8	40-140/25
207-08-9	Benzo(k)fluoranthene	4550	3600	79	3960	87	10	40-140/25
218-01-9	Chrysene	4550	3730	82	4070	90	9	40-140/25
53-70-3	Dibenz(a,h)anthracene	4550	4210	93	4640	102	10	40-140/25
206-44-0	Fluoranthene	4550	3470	76	3800	84	9	40-140/25
86-73-7	Fluorene	4550	2960	65	3010	66	2	40-140/25
193-39-5	Indeno(1,2,3-cd)pyrene	4550	3830	84	4090	90	7	40-140/25
91-57-6	2-Methylnaphthalene	4550	2690	59	2860	63	6	40-140/25
91-20-3	Naphthalene	4550	2210	49	2340	51	6	40-140/25
85-01-8	Phenanthrene	4550	3110	68	3320	73	7	40-140/25
129-00-0	Pyrene	4550	3540	78	3850	85	8	40-140/25
	C11-C22 Aromatics (Unadj.)	72700	63700	88	69300	95	8	40-140/25
	C9-C18 Aliphatics	27300	16900	62	18300	67	8	40-140/25
	C19-C36 Aliphatics	36400	27700	76	29700	82	7	40-140/25

CAS No.	Surrogate Recoveries	BSP	BSD	Limits
84-15-1	o-Terphenyl	73%	82%	40-140%
321-60-8	2-Fluorobiphenyl	77%	94%	40-140%
580-13-2	2-Bromonaphthalene	73%	89%	40-140%
3386-33-2	1-Chlorooctadecane	51%	57%	40-140%

Sample	Compound	Col #1	Col #2	Breakthrough	Limit
OP49808-BS	2-Methylnaphthalene	2690	ND	0.0%	5.0
OP49808-BS	Naphthalene	2210	ND	0.0%	5.0
OP49808-BSD	2-Methylnaphthalene	2860	ND	0.0%	5.0
OP49808-BSD	Naphthalene	2340	ND	0.0%	5.0

* = Outside of Control Limits.

Semivolatile Surrogate Recovery Summary

Job Number: MC50780
Account: ENVTRAC EnviroTrac, Ltd.
Project: Maggiore Somerville, 343 - 351 Summer Street, Somerville, MA

Method: MADEP EPH REV 1.1 **Matrix:** SO

Samples and QC shown here apply to the above method

Lab Sample ID	Lab File ID	S1 [a]	S2 [a]	S3 [a]	S4 [b]
MC50780-1	DE18061.D	88	98	96	72
MC50780-2	DE18062.D	96	109	121	74
MC50780-3	DE18063.D	93	101	113	52
MC50780-4	DE18064.D	87	94	101	65
MC50780-5	DE18065.D	80	82	57	83
OP49808-BS	DE18057.D	73	77	73	51
OP49808-BSD	DE18047.D	82	94	89	57
OP49808-MB	DE18048.D	71	84	91	49

Surrogate Compounds	Recovery Limits
S1 = o-Terphenyl	40-140%
S2 = 2-Fluorobiphenyl	40-140%
S3 = 2-Bromonaphthalene	40-140%
S4 = 1-Chlorooctadecane	40-140%

(a) Recovery from GC signal #1
(b) Recovery from GC signal #2

Misc. Forms

Custody Documents and Other Forms

(SGS Accutest New Jersey)

Includes the following where applicable:

- Chain of Custody
- Sample Tracking Chronicle
- QC Evaluation: MA MCP Limits

SGS ACCUTEST — CHAIN OF CUSTODY — Page 1 of 1

50 D'Angelo Drive, 495 Technology Center West, Bldg One, Marlborough, MA 01752
TEL: 508 481 6200 FAX: 508 481-7753
www.sgs.com

SGS Accutest Quote # 1275 3516 3650 — SGS Accutest Job # MC50780

Client / Reporting Information

Company Name: SGS Accutest
Street Address: 60 D'Angelo Drive, 495 Technology Center West, BLDG One
City: Marlbourough, State: MA, Zip: 0175.
Project Contact: MATT CORDOVA@AccutestLabs.com, E-mail
Phone #: 508-481-6200, Fax #
Sample (s) Name(s): LM, Phone

Project Information

Project Name: Meggiore Somerville, 343 - 351 Summer Street, Somerville, MA
Street
City, State
Project #
Client Purchase Order #
Project Manager

Billing Information (if different from Report to)
Company Name
Street Address
City, State, Zip
Attention

Requested Analysis (see TEST CODE sheet)

Matrix Codes: DW Drinking Water; GW Ground Water; WW Water; SW Surface Water; SO Soil; SL Sludge; SED Sediment; OI Oil; LIQ Other Liquid; AIR Air; SOL Other Solid; WP Wipe; FB Field Blank; EB Equipment Blank; RB Rinse Blank; TB Trip Blank

Lab Accutest Sample #	Field ID / Point of Collection	MATRIX Code	Collection Date	Collection Time	Sampled by	Matrix	# of bottles	Numbers of preserved Bottles	TB	LAB USE ONLY
1	S-9 -10.5'		6/26/17	12:55:00 PM	LM	SO	1	X	X	C325
2	S-10 -10.5'		6/26/17	1:51:00 PM	LM	SO	1	X	X	
3	S-11 -10.5'		6/26/17	1:03:00 PM	LM	SO	1	X	X	
4	S-12 -10.5'		6/26/17	1:05:00 PM	LM	SO	1	X	X	
5	S-13 -10.5'		6/26/17	1:07:00 PM	LM	SO	1	X	X	

INITIAL ASSESSMENT 3A 6/28
LABEL VERIFICATION TRJ

Turnaround Time (Business days)
- [ ] Std. 10 Business Days
- [ ] 5 Day RUSH
- [ ] 3 Day EMERGENCY
- [ ] 2 Day EMERGENCY
- [ ] 1 Day EMERGENCY
- [X] other Due 6/29/2017

Emergency & Rush T/A data available VIA LabNet

Approved By (SGS Accutest PM) / Date

RUSH!

Data Deliverable Information
- [ ] Commercial "A" (Level 1)
- [ ] Commercial "B" (Level 2)
- [ ] FULLT1 (Level 3+4)
- [ ] NJ Reduced
- [ ] Commercial "C"
- [ ] NYASP Category A
- [ ] NYASP Category B
- [ ] State Forms
- [ ] EDD Format
- [X] Other MAMCP

Commercial "A" = Results Only
Commercial "B" = Results + QC Summary
NJ Reduced = Results + QC Summary + Partial Raw data

Comments / Special Instructions
Ship to ALNJ – 3 Day RUSH
MCP: Must meet RCS-1 Stds

Sample Custody must be documented below each time samples change possession, including courier delivery.

Relinquished by Sampler	Date Time	Received By	Relinquished By	Date Time	Received By
1	6-26-17	1 FEDX	2 Fedex	6/27/17 945	2
3		3	4		4
5		5			

Cooler Temp. 20°

SGS Accutest Sample Receipt Summary

Job Number: [illegible] Client: [illegible] Project: [illegible]

Date / Time Received: 6/27/2017 9:45:00 AM Delivery Method: [illegible] Airbill #'s: [illegible]

Cooler Temps (Raw Measured) °C: Cooler 1 (2.0)

Cooler Temps (Corrected) °C: Cooler 1 (3.3)

Cooler Security	Y or N		Y or N
1 Custody Seals Present	☑ ☐	3 COC Present	☑ ☐
2 Custody Seals Intact	☑ ☐	4 Smpl Dates/Time OK	☑ ☐

Cooler Temperature	Y or N
1 Temp criteria achieved	☑ ☐
2 Cooler temp verification	IR Gun
3 [illegible]	[illegible] Bag
4 No. Coolers	1

Quality Control Preservation	Y	or	N	N/A
1 Trip Blank present / cooler	☐		☐	☑
2 Trip Blank listed on COC	☐		☐	☑
3 Samples preserved properly	☑		☐	
4 VOCs headspace free	☐		☐	☑

Sample Integrity - Documentation	Y or N
1 Sample labels present on bottles	☑ ☐
2 Container labeling complete	☑ ☐
3 Sample container label / COC agree	☑ ☐

Sample Integrity - Condition	Y or N
1 Sample recvd within HT	☑ ☐
2 All containers accounted for	☑ ☐
3 Condition of sample	Intact

Sample Integrity - Instructions	Y	or	N	N/A
1 Analysis requested is clear	☑		☐	
2 Bottles received for unspecified tests	☐		☑	
3 Sufficient volume recvd for analysis	☑		☐	
4 Compositing instructions clear	☐		☐	☑
5 Filtering instructions clear	☐		☐	☑

Comments

SMO69-02

MC50780: Chain of Custody

Page [illegible] of 2

7.1

7

SGS Accutest

Internal Sample Tracking Chronicle

SGS Accutest New England

Job No: MC50780

ENVTRAC: Maggiore Somerville, 343 - 351 Summer Street, Somerville, MA
Project No: 03.990202.00

Sample Number	Method	Analyzed	By	Prepped	By	Test Codes
MC50780-1 Collected: 26-JUN-17 12:55 By: LM S-9 ~ 10.5'		Received: 26-JUN-17 By: DDH				
MC50780-1	SW846 6010C	29-JUN-17 01:38	AB	28-JUN-17	RM	PB
MC50780-2 Collected: 26-JUN-17 13:51 By: LM S-10 ~ 10.5'		Received: 26-JUN-17 By: DDH				
MC50780-2	SW846 6010C	29-JUN-17 01:41	AB	28-JUN-17	RM	PB
MC50780-3 Collected: 26-JUN-17 13:03 By: LM S-11 ~ 10.5'		Received: 26-JUN-17 By: DDH				
MC50780-3	SW846 6010C	29-JUN-17 14:42	ND	28-JUN-17	RM	PB
MC50780-4 Collected: 26-JUN-17 13:05 By: LM S-12 ~ 10.5'		Received: 26-JUN-17 By: DDH				
MC50780-4	SW846 6010C	29-JUN-17 01:47	AB	28-JUN-17	RM	PB
MC50780-5 Collected: 26-JUN-17 13:07 By: LM S-13 ~ 10.5'		Received: 26-JUN-17 By: DDH				
MC50780-5	SW846 6010C	29-JUN-17 01:50	AB	28-JUN-17	RM	PB

Page 1 of 1

7.2

7

QC Evaluation: MA MCP Limits

Job Number: MC50780
Account: SGS Accutest New England
Project: ENVTRAC: Maggiore Somerville, 343 - 351 Summer Street, Somerville, MA
Collected: 06 26 17

QC Sample ID	CAS#	Analyte	Sample Type	Result Type	Result	Units	Limits

No Exceptions found.

* Sample used for QC is not from job MC50780

Metals Analysis

QC Data Summaries

(SGS Accutest New Jersey)

Includes the following where applicable:

- Method Blank Summaries
- Matrix Spike and Duplicate Summaries
- Blank Spike and Lab Control Sample Summaries
- Serial Dilution Summaries

Part 2 - Method Blanks

Login Number: MC50780
Account: ALNE - SGS Accutest New England
[illegible] 343 - [illegible] MA

QC Batch ID: MP1663
Matrix Type: SOLID

Methods: SW846 6010C
Units: mg/kg

Prep Date: 06/28/17

[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Aluminum	51	1.1	5.3		
Antimony	2.0	.18	.38		
Arsenic	2.0	.28	.26		
Barium	20	.031	.18		
Beryllium	0.20	.0051	.05		
Bismuth	2.0	.17	.5		
Boron	10	.17	1.3		
[illegible]	[illegible]	[illegible]	[illegible]		
Calcium	510	3.7	43		
Chromium	1.0	.051	.16		
Cobalt	5.1	.041	.071		
Copper	2.6	.051	.4		
Iron	51	.33	4.7		
Lead	2.0	.16	.35	0.061	<2.0
Lithium	5.1	.22	1.2		
Magnesium	510	2.1	14		
Manganese	1.5	.01	.089		
Molybdenum	2.0	.071	.16		
Nickel	4.1	.051	.25		
Phosphorus	10	.35	4.1		
Potassium	1000	4.1	31		
Selenium	2.0	.35	.66		
Silicon	20	.32	2.6		
[illegible]	[illegible]	[illegible]	[illegible]		
Sodium	1000	2	14		
Strontium	5.1	.01	.97		
Sulfur	10	.9	3		
Thallium	1.0	.16	.41		
Tin	10	.13	2.8		
Titanium	1.0	.092	.27		
Tungsten	5.1	.21	1.2		
Vanadium	5.1	.041	.09		
Zinc	5.1	.14	3.9		

8.1.1

8

BLANK RESULTS SUMMARY
Part 2 - Method Blanks

Login Number: MC50780
Account: ALNE - SGS Accutest New England
Project: ENVTRAC: Maggiore Somerville, 343 - 351 Summer Street, Somerville, MA

QC Batch ID: MP1663
Matrix Type: SOLID

Methods: SW846 6010C
Units: mg/kg

Prep Date: 06/28/17

[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Zirconium	2.0	.02	.25		

Associated samples MP1663: MC50780-1, MC50780-2, MC50780-3, MC50780-4, MC50780-5

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(anr) Analyte not requested

8.1.1

8

Metal	BSP Result	Spikelot MPSPK2	% Rec	QC Limits	LCS Result	Spikelot MPLC54091 % Rec	QC Limits
[illegible]	[illegible]						
[illegible]	[illegible]						
[illegible]	[illegible]						
[illegible]	[illegible]						
[illegible]	anr						
[illegible]							
[illegible]							
[illegible]	anr						
[illegible]	anr						
[illegible]	anr						
[illegible]	[illegible]						
Copper	anr						
[illegible]	[illegible]						
Lead	186	192	96.7	80-120	147	146	100.7	82-118
[illegible]							
Magnesium	anr						
[illegible]	[illegible]						
[illegible]							
[illegible]	[illegible]						
[illegible]							
[illegible]	[illegible]						
[illegible]	[illegible]						
[illegible]							
[illegible]	[illegible]						
[illegible]	[illegible]						
[illegible]							
[illegible]							
[illegible]	[illegible]						
[illegible]							
[illegible]							
[illegible]							
[illegible]	[illegible]						
[illegible]	[illegible]						

8.1.2 8

Prep Date: 06/28/17 06/28/17

Metal	BSP Result	Spikelot MPSPK2	% Rec	QC Limits	LCS Result	Spikelot MPLC54091 % Rec	QC Limits
[illegible]							

Associated samples MP1663: MC50780-1, MC50780-2, MC50780-3, MC50780-4, MC50780-5

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(anr) Analyte not requested

8.1.2 8

Login Number: MC50780
Account: ALNE - SGS Accutest New England
Project: ENVIRAC: Maggiore Somerville, 343 - 351 Summer Street, Somerville, MA

QC Batch ID: MP1663 Methods: SW846 6010C

Prep Date: 06/28/17

	LCS	Spikelot	QC	
Aluminum	anr			
Antimony	anr			
Arsenic	anr			
Barium	anr			
Beryllium	anr			
Bismuth				
Cadmium	anr			
Calcium	anr			
Chromium	anr			
Cobalt	anr			
Copper	anr			
Iron	anr			
Lead	145	146	99.3	82-118
Lithium	anr			
Magnesium	anr			
Manganese	anr			
Molybdenum				
Nickel	anr			
Phosphorus				
Potassium	anr			
Selenium	anr			
Silicon				
Silver	anr			
Sodium	anr			
Strontium				
Thallium	anr			
Tin				
Titanium				
Tungsten				
Vanadium	anr			
Zinc	anr			

8.1.2 8

SPIKE BLANK AND LAB CONTROL SAMPLE SUMMARY

Login Number: MC50780
Account: ALNE - SGS Accutest New England
Project: ENVIRAC: Maggiore Somerville, 343 - 351 Summer Street, Somerville, MA

QC Batch ID: MP1663 Methods: SW846 6010C
Matrix Type: SOLID Units: mg/kg

Prep Date: 06/28/17

	LCS	Spikelot	QC	
Metal	[illegible]	[illegible]	[illegible]	

Associated samples MP1663: MC50780-1, MC50780-2, MC50780-3, MC50780-4, MC50780-5

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(anr) Analyte not requested

8.1.2 8

Magnesium anr

Matrix Type: LIQ

Prep Date: 06/26/17

Associated samples MP1663: MC50780-1, MC50780-2, MC50780-3, MC50780-4, MC50780-5

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(anr) Analyte not requested

SGS ACCUTEST
New England

SGS ACCUTEST IS PART OF SGS, THE WORLD'S LEADING INSPECTION, VERIFICATION, TESTING AND CERTIFICATION COMPANY.

e-Hardcopy 2.0

Technical Report for

EnviroTrac, Ltd.

Maggiore Somerville, 343 - 351 Summer Street, Somerville, MA

03.990202.01

SGS Accutest Job Number: MC50802

Sampling Date: 06/26/17

Report to:

EnviroTrac
2 Merchant Street Suite 2
Sharon, MA 02067
denat@envirotrac.com

ATTN: Dena Tomassi

Total number of pages in report: 36

Test results contained within this data package meet the requirements of the National Environmental Laboratory Accreditation Program and/or state specific certification programs as applicable.

H. (Brad) Madadian
Lab Director

Client Service contact: Marty Vitanza 508-481-6200

Certifications: MA (M-MA136,SW846 NELAC) CT (PH-0109) NH (250210) RI (00071) FL (E87579) NJ (MA926) PA (6801121) LA (AI171119) ND (R-188) NC (653) IL (002337) WI (399080220) DoD ELAP (L-A-B L2235)

Table of Contents

Sample Summary

EnviroTrac, Ltd.

Job No: MC50802

Maggiore Somerville, 343 - 351 Summer Street, Somerville, MA
Project No: 03.990202.01

Sample Number	Collected Date	Time	By	Received	Matrix Code	Matrix Type	Client Sample ID
MC50802-1	06/26/17	14:05	LM	06/27/17	SO	Soil	S-14 ~ 10.5'

Soil samples reported on a dry weight basis unless otherwise indicated on result page.

SAMPLE DELIVERY GROUP CASE NARRATIVE

Client: EnviroTrac, Ltd. **Job No** MC50802

Site: Maggiore Somerville, 343 - 351 Summer Street, Somerville, MA **Report Date** 6/30/2017 4:05:19 PM

1 Sample(s) were collected on 06/26/2017 and were received at SGS Accutest New England on 06/27/2017, at 10.4 Deg. C and intact. These Samples received a job number of MC50802. A listing of the Laboratory Sample ID, Client Sample ID and dates of collection are presented in the Results Summary Section of this report.

Except as noted below, all method specified calibrations and quality control performance criteria were met for this job. For more information, please refer to QC summary pages

Extractables by GC By Method MADEP EPH REV 1.1

Matrix: SO **Batch ID:** OP49816

- All samples were extracted within the recommended method holding time
- All samples were analyzed within the recommended method holding time.
- All method blanks for this batch meet method specific criteria

Metals By Method SW846 6010C

Matrix: SO **Batch ID:** MP1680

- MC50802-1 for Lead: Analysis performed at SGS Accutest, Dayton, NJ

SGS Accutest New England certifies that all analysis were performed within method specification It is further recommended that this report to be used in its entirety. The Laboratory Director for SGS Accutest New England or assignee as verified by the signature on the cover page has authorized the release of this report(MC50802)

CASE NARRATIVE / CONFORMANCE SUMMARY

Client: SGS Accutest New England **Job No** MC50802

Site: ENVTRAC: Maggiore Somerville, 343 - 351 Summer Street, Somer **Report Date** 6/30/2017 3:16:31 PM

On 06/28/2017, 1 Sample(s), 0 Trip Blank(s) and 0 Field Blank(s) were received at SGS Accutest at a maximum corrected temperature of 3.1 C. Samples were intact and chemically preserved, unless noted below. A SGS Accutest Job Number of MC50802 was assigned to the project. Laboratory sample ID, client sample ID and dates of sample collection are detailed in the report's Results Summary Section.

Specified quality control criteria were achieved for this job except as noted below. For more information, please refer to the analytical results and QC summary pages.

Metals By Method SW846 6010C

Matrix: SO **Batch ID:** MP1680

- All samples were digested within the recommended method holding time.
- All method Blanks for this batch meet method specific criteria.
- Sample(s) JC45809-5SDL were used as the QC samples for metals.

SGS Accutest certifies that data reported for samples received, listed on the associated custody chain or analytical task order, were produced to specifications meeting the Quality System precision, accuracy and completeness objectives except as noted.

Estimated non-standard method measurement uncertainty data is available on request, based on quality control bias and implicit for standard methods. Acceptable uncertainty requires tested parameter quality control data to meet method criteria.

SGS Accutest is not responsible for data quality assumptions if partial reports are used and recommends that this report be used in its entirety. Data release is authorized by SGS Accutest indicated via signature on the report cover.

2.1

2

Summary of Hits

Job Number: MC50802
Account: EnviroTrac, Ltd.
Project: Maggiore Somerville, 343 - 351 Summer Street, Somerville, MA
Collected: 06/26/17

3

Lab Sample ID / Analyte	Client Sample ID	Result/ Qual	RL	MDL	Units	Method
MC50802-1	**S-14 ~ 10.5'**					
C9-C18 Aliphatics		245	11		mg/kg	MADEP EPH REV 1.1
C19-C36 Aliphatics		108	23		mg/kg	MADEP EPH REV 1.1
Lead [a]		13.3	2.5		mg/kg	SW846 6010C

(a) Analysis performed at SGS Accutest, Dayton, NJ.

Sample Results

Report of Analysis

Report of Analysis

Client Sample ID:	S-14 ~ 10.5'		
Lab Sample ID:	MC50802-1	**Date Sampled:**	06/26/17
Matrix:	SO - Soil	**Date Received:**	06/27/17
Method:	MADEP EPH REV 1.1 SW846 3546	**Percent Solids:**	79.0
Project:	Maggiore Somerville, 343 - 351 Summer Street, Somerville, MA		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	DE18079.D	1	06/30/17 14:04	AP	06/29/17 14:00	OP49816	GDE998
Run #2							

	Initial Weight	Final Volume
Run #1	11.2 g	2.0 ml
Run #2		

CAS No.	Compound	Result	RL	Units	Q
83-32-9	Acenaphthene	ND	0.56	mg/kg	
208-96-8	Acenaphthylene	ND	0.56	mg/kg	
120-12-7	Anthracene	ND	0.56	mg/kg	
56-55-3	Benzo(a)anthracene	ND	0.56	mg/kg	
50-32-8	Benzo(a)pyrene	ND	0.56	mg/kg	
205-99-2	Benzo(b)fluoranthene	ND	0.56	mg/kg	
191-24-2	Benzo(g,h,i)perylene	ND	0.56	mg/kg	
207-08-9	Benzo(k)fluoranthene	ND	0.56	mg/kg	
218-01-9	Chrysene	ND	0.56	mg/kg	
53-70-3	Dibenz(a,h)anthracene	ND	0.56	mg/kg	
206-44-0	Fluoranthene	ND	0.56	mg/kg	
86-73-7	Fluorene	ND	0.56	mg/kg	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	0.56	mg/kg	
91-57-6	2-Methylnaphthalene	ND	0.56	mg/kg	
91-20-3	Naphthalene	ND	0.56	mg/kg	
85-01-8	Phenanthrene	ND	0.56	mg/kg	
129-00-0	Pyrene	ND	0.56	mg/kg	
	C11-C22 Aromatics (Unadj.)	ND	23	mg/kg	
	C9-C18 Aliphatics	245	11	mg/kg	
	C19-C36 Aliphatics	108	23	mg/kg	
	C11-C22 Aromatics	ND	23	mg/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
84-15-1	o-Terphenyl	91%		40-140%
321-60-8	2-Fluorobiphenyl	94%		40-140%
580-13-2	2-Bromonaphthalene	100%		40-140%
3386-33-2	1-Chlorooctadecane	102%		40-140%

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	S-14 ~ 10.5'		
Lab Sample ID:	MC50802-1	**Date Sampled:**	06'26'17
Matrix:	SO - Soil	**Date Received:**	06/27/17
		Percent Solids:	79.0
Project:	Maggiore Somerville, 343 - 351 Summer Street, Somerville, MA		

Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Lead [a]	13.3	2.5	mg/kg	1	06/29/17	06/30/17	ANJ	SW846 6010C [1]	SW846 3050B [2]

(1) Instrument QC Batch: N:MA42339
(2) Prep QC Batch: N:MP1680

(a) Analysis performed at SGS Accutest, Dayton, NJ.

RL = Reporting Limit

Section 5

Misc. Forms

Custody Documents and Other Forms

Includes the following where applicable:

- Chain of Custody
- MCP Form
- MCP Form (SGS Accutest New Jersey)
- EPH Form
- Sample Tracking Chronicle
- QC Evaluation: MA MCP Limits

SGS ACCUTEST

CHAIN OF CUSTODY

PAGE 1 OF 1

SGS Accutest, Marlborough Technology Center West, Building One Northborough, MA 01752
TEL. 508-481-6200 FAX. 508-481-7753
www.accutest.com

FED-EX Tracking #

Bottle Order Control #

SGS Accutest Quote #

SGS Accutest Job # MC50802

Client / Reporting Information

Company Name: Envirotrac Ltd
Street Address: 2 Merchant St.
City: Sharon State: MA Zip: 02067
Project Contact: D. Tomassi E-mail: donat@envirotrac.com
Phone #: 781-793-0074 Fax #:
Sampler(s) Name(s): L. Main Phone #:

Project Information

Project Name: Maggiore Somerville
Street: 343-351 Summer St
City: Somerville, MA
Project #: 03190202.01
Client PO#:
Project Manager: D. Tomassi
Attention: PO#:

Billing Information (If different from Report to)

Company Name:
Street Address:
City: State: Zip:
PO#:

Requested Analysis (see TEST CODE sheet)

EPH w/ PAHs
Pb

Matrix Codes: DW - Drinking Water; GW - Ground Water; WW - Water; SW - Surface Water; SO - Soil; SL - Sludge; SED - Sediment; OI - Oil; LIQ - Other Liquid; AIR - Air; SOL - Other Solid; WP - Wipe; FB - Field Blank; EB - Equipment Blank; RB - Rinse Blank; TB - Trip Blank

LAB USE ONLY

SGS Accutest Sample #	Field ID / Point of Collection	MeOH Clip #	Collection Date	Collection Time	Sampled by	Matrix	# of bottles	Number of preserved Bottles								
								DI	HCl	H2SO4	HNO3	NaOH	ZnAc	NaHSO4	MEOH	ENCORE
A	S-14 @10.5'		6/26/17	11:05	LM	SO	1						1			

SAMPLES RECEIVED DIRECTLY FROM FIELD SAMPLING

Turnaround Time (Business days)

- Std. 10 Business Days
- Std. 5 Business Days (By Contract only)
- 5 Day RUSH
- [X] 3 Day EMERGENCY
- 2 Day EMERGENCY
- 1 Day EMERGENCY

Emergency & Rush T/A data available VIA Labnet

Approved By (SGS Accutest PM) / Date:

RUSH!

Data Deliverable Information

- Commercial "A" (Level 1)
- Commercial "B" (Level 2)
- FULLT1 (Level 3+4)
- CT RCP
- [X] MA MCP
- NYASP Category A
- NYASP Category B
- State Forms
- EDD Format
- Other

Commercial "A" = Results Only
Commercial "B" = Results + QC Summary

Comments / Special Instructions

Must meet RCS-1 standards

INITIAL ASESSMENT

LABEL VERIFICATION

Sample Custody must be documented below each time samples change possession, including courier delivery.

Relinquished by Sampler	Date Time:	Received By:	Relinquished By:	Date Time:	Received By:
1	6/27/17 1805	2	2		2
Relinquished by:	Date Time:	Received By:	Relinquished By:	Date Time:	Received By:
3		3	4		4
Relinquished by:	Date Time:	Received By:	Custody Seal #	Intact	Preserved where applicable	On Ice	Cooler Temp.
5		5		Not Intact			10.9

SGS Accutest Sample Receipt Summary

Job Number: MC50802 **Client:** ENVIROTRAC **Project:** MAGGIORE SOMERVILLE

Date / Time Received: 6/27/2017 6 05.00 PM **Delivery Method:** Client **Airbill #'s:**

Cooler Temps (Initial/Adjusted): #1 (10 9/10 4),

Cooler Security	Y or N		Y or N
1. Custody Seals Present.	☐ ☑	3. COC Present.	☑ ☐
2. Custody Seals Intact.	☐ ☑	4. Smpl Dates/Time OK	☑ ☐

Cooler Temperature	Y or N
1. Temp criteria achieved:	☐ ☑
2. Cooler temp verification.	IRGUN1
3 Cooler media.	Ice (Bag)
4. No. Coolers:	1

Quality Control Preservation	Y	N	N/A
1. Trip Blank present / cooler:	☐	☐	
2. Trip Blank listed on COC:	☐	☐	
3 Samples preserved properly:	☑	☐	
4. VOCs headspace free.	☐	☐	☑

Sample Integrity - Documentation	Y or N
1 Sample labels present on bottles:	☑ ☐
2. Container labeling complete:	☑ ☐
3. Sample container label / COC agree	☑ ☐

Sample Integrity - Condition	Y or N
1. Sample rec'd within HT.	☑ ☐
2. All containers accounted for.	☑ ☐
3. Condition of sample:	Intact

Sample Integrity - Instructions	Y	N	N/A
1. Analysis requested is clear.	☑	☐	
2. Bottles received for unspecified tests	☐	☑	
3. Sufficient volume rec'd for analysis:	☑	☐	
4. Compositing instructions clear:	☐	☐	☑
5. Filtering instructions clear:	☐	☐	☑

Comments

Samples received at temp of 10 9 deg C. Date of collection 6/26/17 on COC. Please confirm

Sample Receipt Summary - Problem Resolution

Job Number: [redacted]

CSR: [redacted] Response Date: 6/28/2017

Response: [redacted]

Soil sample S-14 was collected on 6/26. Please run analyses as requested despite the temperature.

Email scanned into notes.

MC50802: Chain of Custody
Page 3 of 3

Massachusetts Department of Environmental Protection Bureau of Waste Site Cleanup	WSC-CAM	Exhibit VII A
	July 1, 2010	Revision No. 1
	Final	

Exhibit VII A-2: MassDEP Analytical Protocol Certification Form

MassDEP Analytical Protocol Certification Form

Laboratory Name	SGS Accutest- Marlborough	Project #:	MC50802
Project Location:	Maggiore Somerville, 343 - 351 Summer Street, Somerville, MA	MADEP RTN	None

This form provides certifications for the following data set: list Laboratory Sample ID Numbers(s)
MC50802-1

Matrices: Groundwater/Surface Water ( ) Soil/Sediment (X) Drinking Water ( ) Air ( ) Other ( )

CAM Protocol (check all that apply below)

8260 VOC ( ) CAM IIA	7470/7471 Hg ( ) CAM III B	MassDEP VPH ( ) CAM IV A	8081 Pesticides ( ) CAM V B	7196 Hex Cr ( ) CAM VI B	Mass DEP APH ( ) CAM IX A
8270 SVOC ( ) CAM II B	7010 Metals ( ) CAM III C	MassDEP EPH (X) CAM IV B	8151 Herbicides ( ) CAM V C	8330 Explosives ( ) CAM VIII A	TO-15 VOC ( ) CAM IX B
6010 Metals (X) CAM III A	6020 Metals ( ) CAM III D	8082 PCB ( ) CAM V A	9014 Total Cyanide/PAC ( ) CAM VI A	6860 Perchlorate ( ) CAM VIII B	

Affirmative Responses to Questions A Through F are required for "Presumptive Certainty status

A	Were all samples received in a condition consistent with those described on the Chain-of Custody, properly preserved (including temperature) in the field or laboratory, and prepared/analyzed within method holding times?	☐ Yes	☑ No
B	Were the analytical method(s) and all associated QC requirements specified in the selected CAM protocol(s) followed?	☑ Yes	☐ No
C	Were all required corrective actions and analytical response actions specified in the selected CAM protocol(s) implemented for all identified performance standard non-conformances?	☑ Yes	☐ No
D	Does the laboratory report comply with all the reporting requirements specified in CAM VII A, "Quality Assurance and Quality Control Guidelines for the Acquisition and Reporting of Analytical Data"?	☑ Yes	☐ No
E	VPH, EPH, APH, and TO-15 only: a. VPH, EPH, and APH Methods only: Was each method conducted without significant modification(s)? (Refer to the individual method(s) for a list of significant modifications). b. APH and TO-15 Methods only: Was the complete analyte list reported for each method?	☑ Yes ☐ Yes	☐ No ☐ No
F	Were all applicable CAM protocol QC and performance standard non-conformances identified and evaluated in a laboratory narrative (including all "No" responses to Questions A through E)?	☑ Yes	☐ No

Responses to questions G, H, and I below is required for "Presumptive Certainty" status

G	Were the reporting limits at or below all CAM reporting limits specified in the selected CAM protocols	☑ Yes	☐ No
	Data User Note: Data that achieve "Presumptive Certainty" status may not necessarily meet the data useability and representativeness requirements described in 310 CMR 40.1056(2)(k) and WSC-07-350.		
H	Were all QC performance standards specified in the CAM protocol(s) achieved?	☑ Yes	☐ No
I	Were results reported for the complete analyte list specified in the selected CAM protocol(s)?	☐ Yes	☑ No

All Negative responses must be addressed in an attached Environmental Laboratory case narrative.

I the undersigned, attest under the pains and penalties of perjury that, based upon my personal inquiry of those responsible for obtaining the information, the material contained in this analytical report is, to the best of my knowledge and belief, accurate and complete.

Signature: [signature] Position: Laboratory Director

Printed Name: H. (Brad) Madadian Date: 30-Jun-17

Massachusetts Department of Environmental Protection Bureau of Waste Site Cleanup	WSC-CAM	Exhibit VII A
	July 1, 2010	Revision No. 1
	Final	

Exhibit VII A-2: MassDEP Analytical Protocol Certification Form

MassDEP Analytical Protocol Certification Form

Laboratory Name	Accutest Mid-Atlantic	Project #	MC50802
Project Location #01074,	ENVTRAC: Maggiore Somerville, 343 - 351 Summer Street, Somerville, MA	MADEP RTN	None

This form provides certifications for the following data set: list Laboratory Sample ID Numbers(s)
MC50802-1

Matrices: Groundwater/Surface Water ( ) Soil/Sediment (X) Drinking Water ( ) Air ( ) Other ( )

CAM Protocol (check all that apply below)

8260 VOC ( ) CAM IIA	7470/7471 Hg ( ) CAM III B	MassDEP VPH ( ) CAM IV A	8081 Pesticides ( ) CAM V B	7196 Hex Cr ( ) CAM VI B	Mass DEP APH ( ) CAM IX A
8270 SVOC ( ) CAM II B	7010 Metals ( ) CAM III C	MassDEP EPH ( ) CAM IV B	8151 Herbicides ( ) CAM V C	8330 Explosives ( ) CAM VIII A	TO-15 VOC ( ) CAM IX B
6010 Metals (X) CAM III A	6020 Metals ( ) CAM III D	8082 PCB ( ) CAM V A	9014 Total Cyanide/PAC ( ) CAM VI A	6860 Perchlorate ( ) CAM VIII B	

Affirmative Responses to Questions A Through F are required for "Presumptive Certainty status

A	Were all samples received in a condition consistent with those described on the Chain-of Custody, properly preserved (including temperature) in the field or laboratory, and prepared/analyzed within method holding times?	☑ Yes	☐ No
B	Were the analytical method(s) and all associated QC requirements specified in the selected CAM protocol(s) followed?	☑ Yes	☐ No
C	Were all required corrective actions and analytical response actions specified in the selected CAM protocol(s) implemented for all identified performance standard non-conformances?	☑ Yes	☐ No
D	Does the laboratory report comply with all the reporting requirements specified in CAM VII A, "Quality Assurance and Quality Control Guidelines for the Acquisition and Reporting of Analytical Data"?	☑ Yes	☐ No
E	VPH, EPH, APH, and TO-15 only. a. VPH, EPH, and APH Methods only: Was each method conducted without significant modification(s)? (Refer to the individual method(s) for a list of significant modifications)	☐ Yes	☐ No
	b. APH and TO-15 Methods only: Was the complete analyte list reported for each method?	☐ Yes	☐ No
F	Were all applicable CAM protocol QC and performance standard non-conformances identified and evaluated in a laboratory narrative (including all "No" responses to Questions A through E)?	☑ Yes	☐ No

Responses to questions G, H, and I below is required for "Presumptive Certainty" status

G	Were the reporting limits at or below all CAM reporting limits specified in the selected CAM protocols	☑ Yes	☐ No '
	Data User Note: **Data that achieve "Presumptive Certainty" status may not necessarily meet the data useability and representativeness requirements described in 310 CMR 40.1056(2)(k) and WSC-07-350.**		
H	Were **all** QC performance standards specified in the CAM protocol(s) achieved?	☑ Yes	☐ No '
I	Were results reported for the complete analyte list specified in the selected CAM protocol(s)?	☐ Yes	☑ No '

All Negative responses must be addressed in an attached Environmental Laboratory case narrative.

I the undersigned, attest under the pains and penalties of perjury that, based upon my personal inquiry of those responsible for obtaining the information, the material contained in this analytical report is, to the best of my knowledge and belief, accurate and complete.

Signature: Nancy F. Cole Position: Laboratory Director

Printed Name: Nancy F. Cole Date: 30-Jun-17

MADEP EPH FORM

Matrix	Aqueous ☐	Soil ☑	Sediment ☐	Other ☐			
Containers	Satisfactory ☑	Broken ☐	Leaking ☐				
Aqueous Preservatives	N/A ☑	pH <= 2 ☐	pH > 2 ☐				
Temperature	Received on Ice ☐	Received at 4 Deg. C ☐	Other ☑	Rec'd at 10.4 Deg C			
Extraction Method	SW846 3546						

Method for Ranges:	MADEP EPH REV 1.1	Client ID:	S-14 ~10.5'	Lab ID:	MC50802-1
Method for Targets:	MADEP EPH REV 1.1	Date Collected:	6/26/2017	Date Received:	6/27/2017
EPH Surrogate Stds.	Aliphatic: 1-Chlorooctadecane Aromatic: o-Terphenyl	Date Extracted:	6/29/2017 2:00:00 PM	First Date Run:	6/30/2017
				Last Date Run:	N/A
EPH Fractionation Surrogate Standards.	2-Fluorobiphenyl 2-Bromonaphthalene	% Solids:	79	Low Dilution:	1
				High Dilution:	N/A

Unadjusted Ranges	CAS #	Units	Result	RDL	Q
C11-C22 Aromatics (Unadj.)		mg/kg	ND [A]	23	
Diesel PAH Analytes					
Naphthalene	91-20-3	mg/kg	ND	0.56	
2-Methylnaphthalene	91-57-6	mg/kg	ND	0.56	
Phenanthrene	85-01-8	mg/kg	ND	0.56	
Acenaphthene	83-32-9	mg/kg	ND	0.56	
Other Target PAH Analytes					
Acenaphthylene	208-96-8	mg/kg	ND	0.56	
Anthracene	120-12-7	mg/kg	ND	0.56	
Benzo(a)anthracene	56-55-3	mg/kg	ND	0.56	
Benzo(a)pyrene	50-32-8	mg/kg	ND	0.56	
Benzo(b)fluoranthene	205-99-2	mg/kg	ND	0.56	
Benzo(g,h,i)perylene	191-24-2	mg/kg	ND	0.56	
Benzo(k)fluoranthene	207-08-9	mg/kg	ND	0.56	
Chrysene	218-01-9	mg/kg	ND	0.56	
Dibenz(a,h)anthracene	53-70-3	mg/kg	ND	0.56	
Fluoranthene	206-44-0	mg/kg	ND	0.56	
Fluorene	86-73-7	mg/kg	ND	0.56	
Indeno(1,2,3-cd)pyrene	193-39-5	mg/kg	ND	0.56	
Pyrene	129-00-0	mg/kg	ND	0.56	
Adjusted Ranges					
C9-C18 Aliphatics		mg/kg	245 [A]	11	
C19-C36 Aliphatics		mg/kg	108 [A]	23	
C11-C22 Aromatics		mg/kg	ND [B]	23	
Surrogate Recoveries				**Acceptance Range**	
1-Chlorooctadecane		%	102	40-140 %	
o-Terphenyl		%	91	40-140 %	
2-Fluorobiphenyl		%	94	40-140 %	
2-Bromonaphthalene		%	100	40-140 %	

Footnotes

A Hydrocarbon Range data exclude concentrations of any surrogate(s) and/or internal standards eluting in that range

B Hydrocarbon Range data exclude concentrations of any surrogate(s) and/or internal standards eluting in that range. C11-C22 Aromatic Hydrocarbons exclude the concentration of Target PAH Analytes

Z A 'J' qualifier indicates an estimated value

Were all QA/QC procedures REQUIRED by the EPH Method followed? ☑ Yes ☐ No- Details Attatched

Were all performance/acceptance standards for required QA/QC procedures achieved? ☑ Yes ☐ No- Details Attatched

Were any significant modifications made to the EPH method, as specified in Sect. 11.3? ☑ No ☐ Yes- Details Attatched

I attest under the pains and penalties of perjury that, based upon my inquiry of those individuals immediately responsible for obtainig the information, the material contained in this report is, to the best of my knowledge and belief, accurate and complete.

Signature: H. Madadian Postition: Laboratory Director

Printed Name: H. (Brad) Madadian Date: 6/30/2017

Internal Sample Tracking Chronicle

EnviroTrac, Ltd.

Job No: MC50802

Maggiore Somerville, 343 - 351 Summer Street, Somerville, MA
Project No: 03.990202.01

Sample Number	Method	Analyzed	By	Prepped	By	Test Codes
MC50802-1 Collected: 26-JUN-17 14:05 By: LM		Received: 27-JUN-17 By: TF				
S-14 ~ 10 5'						
MC50802-1	SM 2540G-97 MOD	28-JUN-17	EAL			SOL104
MC50802-1	SW846 6010C	30-JUN-17 11:03	ANJ	29-JUN-17	ANJ	PB
MC50802-1	MADEP EPH REV 1.1	30-JUN-17 14:04	AP	29-JUN-17	AJ	BMAEPH

QC Evaluation: MA MCP Limits

Job Number: MC50802
Account: EnviroTrac, Ltd.
Project: Maggiore Somerville, 343 - 351 Summer Street, Somerville, MA
Collected: 06/26/17

QC Sample ID	CAS#	Analyte	Sample Type	Result Type	Result	Units	Limits

No Exceptions found.

* Sample used for QC is not from job MC50802

GC Semi-volatiles

QC Data Summaries

Includes the following where applicable:

- Method Blank Summaries
- Blank Spike Summaries
- Matrix Spike and Duplicate Summaries
- Surrogate Recovery Summaries

Method Blank Summary

Job Number: MC50802
Account: ENVTRAC EnviroTrac, Ltd.
Project: Maggiore Somerville, 343 - 351 Summer Street, Somerville, MA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP49816-MB	DE18077.D	1	06/30/17	AP	06/29/17	OP49816	GDE998

The QC reported here applies to the following samples: **Method:** MADEP EPH REV 1.1

MC50802-1

CAS No.	Compound	Result	RL	Units	Q
83-32-9	Acenaphthene	ND	450	ug/kg	
208-96-8	Acenaphthylene	ND	450	ug/kg	
120-12-7	Anthracene	ND	450	ug/kg	
56-55-3	Benzo(a)anthracene	ND	450	ug/kg	
50-32-8	Benzo(a)pyrene	ND	450	ug/kg	
205-99-2	Benzo(b)fluoranthene	ND	450	ug/kg	
191-24-2	Benzo(g,h,i)perylene	ND	450	ug/kg	
207-08-9	Benzo(k)fluoranthene	ND	450	ug/kg	
218-01-9	Chrysene	ND	450	ug/kg	
53-70-3	Dibenz(a,h)anthracene	ND	450	ug/kg	
206-44-0	Fluoranthene	ND	450	ug/kg	
86-73-7	Fluorene	ND	450	ug/kg	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	450	ug/kg	
91-57-6	2-Methylnaphthalene	ND	450	ug/kg	
91-20-3	Naphthalene	ND	450	ug/kg	
85-01-8	Phenanthrene	ND	450	ug/kg	
129-00-0	Pyrene	ND	450	ug/kg	
	C11-C22 Aromatics (Unadj.)	ND	18000	ug/kg	
	C9-C18 Aliphatics	ND	9100	ug/kg	
	C19-C36 Aliphatics	ND	18000	ug/kg	
	C11-C22 Aromatics	ND	18000	ug/kg	

CAS No.	Surrogate Recoveries		Limits
84-15-1	o-Terphenyl	80%	40-140%
321-60-8	2-Fluorobiphenyl	86%	40-140%
580-13-2	2-Bromonaphthalene	91%	40-140%
3386-33-2	1-Chlorooctadecane	64%	40-140%

Blank Spike/Blank Spike Duplicate Summary

Job Number: MC50802
Account: ENVTRAC EnviroTrac, Ltd
Project: Maggiore Somerville, 343 - 351 Summer Street, Somerville, MA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP49816-BS	DE18075.D	1	06/30/17	AP	06/29/17	OP49816	GDE998
OP49816-BSD	DE18076.D	1	06/30/17	AP	06/29/17	OP49816	GDE998

The QC reported here applies to the following samples: **Method:** MADEP EPH REV 1.1

MC50802-1

CAS No.	Compound	Spike ug/kg	BSP ug/kg	BSP %	BSD ug/kg	BSD %	RPD	Limits Rec/RPD
83-32-9	Acenaphthene	4550	3510	77	4250	94	19	40-140/25
208-96-8	Acenaphthylene	4550	3510	77	4250	94	19	40-140/25
120-12-7	Anthracene	4550	4140	91	4930	108	17	40-140/25
56-55-3	Benzo(a)anthracene	4550	4500	99	5460	120	19	40-140/25
50-32-8	Benzo(a)pyrene	4550	4660	103	5630	124	19	40-140/25
205-99-2	Benzo(b)fluoranthene	4550	4940	109	5730	126	15	40-140/25
191-24-2	Benzo(g,h,i)perylene	4550	5200	114	6160	136	17	40-140/25
207-08-9	Benzo(k)fluoranthene	4550	4380	96	5480	121	22	40-140/25
218-01-9	Chrysene	4550	4650	102	5550	122	18	40-140/25
53-70-3	Dibenz(a,h)anthracene	4550	5220	115	6260	138	18	40-140/25
206-44-0	Fluoranthene	4550	4350	96	5290	116	20	40-140/25
86-73-7	Fluorene	4550	3480	77	4280	94	21	40-140/25
193-39-5	Indeno(1,2,3-cd)pyrene	4550	4820	106	5720	126	17	40-140/25
91-57-6	2-Methylnaphthalene	4550	3630	80	4420	97	20	40-140/25
91-20-3	Naphthalene	4550	3160	70	3760	83	17	40-140/25
85-01-8	Phenanthrene	4550	3920	86	4850	107	21	40-140/25
129-00-0	Pyrene	4550	4420	97	5370	118	19	40-140/25
	C11-C22 Aromatics (Unadj.)	72700	80300	110	95100	131	17	40-140/25
	C9-C18 Aliphatics	27300	25300	93	25000	92	1	40-140/25
	C19-C36 Aliphatics	36400	40000	110	40300	111	1	40-140/25

CAS No.	Surrogate Recoveries	BSP	BSD	Limits
84-15-1	o-Terphenyl	92%	113%	40-140%
321-60-8	2-Fluorobiphenyl	95%	114%	40-140%
580-13-2	2-Bromonaphthalene	86%	108%	40-140%
3386-33-2	1-Chlorooctadecane	77%	82%	40-140%

Sample	Compound	Col #1	Col #2	Breakthrough	Limit
OP49816-BS	2-Methylnaphthalene	3630	ND	0.0%	5.0
OP49816-BS	Naphthalene	3160	ND	0.0%	5.0
OP49816-BSD	2-Methylnaphthalene	4420	ND	0.0%	5.0
OP49816-BSD	Naphthalene	3760	ND	0.0%	5.0

* = Outside of Control Limits.

Semivolatile Surrogate Recovery Summary

Job Number: MC50802
Account: ENVTRAC EnviroTrac, Ltd.
Project: Maggiore Somerville, 343 - 351 Summer Street, Somerville, MA

Method: MADEP EPH REV 1.1 **Matrix:** SO

Samples and QC shown here apply to the above method

Lab Sample ID	Lab File ID	S1 [a]	S2 [a]	S3 [a]	S4 [b]
MC50802-1	DE18079.D	91	94	100	102
OP49816-BS	DE18075.D	92	95	86	77
OP49816-BSD	DE18076.D	113	114	108	82
OP49816-MB	DE18077.D	80	86	91	64

Surrogate Compounds	Recovery Limits
S1 = o-Terphenyl	40-140%
S2 = 2-Fluorobiphenyl	40-140%
S3 = 2-Bromonaphthalene	40-140%
S4 = 1-Chlorooctadecane	40-140%

(a) Recovery from GC signal #1
(b) Recovery from GC signal #2

Misc. Forms

Custody Documents and Other Forms

(SGS Accutest New Jersey)

Includes the following where applicable:

- Chain of Custody
- Sample Tracking Chronicle
- QC Evaluation: MA MCP Limits

SGS ACCUTEST — CHAIN OF CUSTODY — Page 1 of 1

50 D'Angelo Drive, 495 Technology Center West, Bldg One, Marlborough, MA 01752
TEL: 508.481.6200 FAX: 508.481.7753
www.sgs.com

FedEx Tracking # 7279 7516 3775 — SGS Accutest Job # MC50802

Client / Reporting Information	Project Information	Requested Analysis (see TEST CODE sheet)
Company Name: SGS Accutest	Project Name: Maggiore Somerville 343 - 351 Summer Street, Somerville, MA	
Street Address: 50 D'Angelo Drive, 495 Technology Center West, BLDG One	Street:	Billing Information (if different from Report to)
City: Marlbourough, State: MA, Zip: 01752	City: State:	Company Name:
Project Contact: MARTY VITANZA@Accutest.com, E-mail:	Project #:	Street Address:
Phone #: 508-481-6200, Fax #:	Client Purchase Order #:	City: State: Zip:
Sampler(s) Name(s): LM, Phone:	Project Manager:	Attention:

Lab Sample #	Field ID / Point of Collection	MEOH Vial #	Collection Date	Collection Time	Sampled By	Matrix	# of bottles	HCl	H2SO4	NaOH	HNO3	DI Water	MEOH	ENCORE	PB	Matrix Codes / LAB USE ONLY
1	S-14 -10.5'		6/26/17	2:05:00 PM	LM	SO	1				x				X	C13

Turnaround Time (Business days)

- [ ] Std. 10 Business Days
- [ ] 5 Day RUSH
- [ ] 3 Day EMERGENCY
- [ ] 2 Day EMERGENCY
- [ ] 1 Day EMERGENCY
- [X] other Due 6/30/2017

Emergency & Rush T/A data available VIA Labfax

Approved By (SGS Accutest PM): / Date:

RUSH!

Data Deliverable Information

- [ ] Commercial "A" (Level 1)
- [ ] Commercial "B" (Level 2)
- [ ] FULLT1 (Level 3+4)
- [ ] NJ Reduced
- [ ] Commercial "C"
- [ ] NYASP Category A
- [ ] NYASP Category B
- [ ] State Forms
- [ ] SDG Format
- [X] Other MAMCP

Commercial "A" = Results Only
Commercial "B" = Results + QC Summary
NJ Reduced = Results + QC Summary + Partial Raw data

Comments / Special Instructions

Ship to At NJ -- 3 Day RUSH
MCP: Must meet RCS-1 Stds

INITIAL ASESSMENT
LABEL VERIFICATION

Sample Custody must be documented below each time samples change possession, including courier delivery

Relinquished by Sampler	Date Time	Received By	Relinquished By	Date Time	Received By
1	6/27/17 1830	1	2	6/28/17	2
Relinquished by Sampler	Date Time	Received By	Relinquished By	Date Time	Received By
3		3	4	9:25	4
Relinquished by	Date Time	Received By	Custody Seal # 620	Intact / Not Intact	Preserved where applicable / On Ice / Cooler Temp 1.8 C
6		5			

SGS Accutest Sample Receipt Summary

Job Number: MC50802 Client: Project:

Date / Time Received: 6/28/2017 9 25 00 AM Delivery Method Airbill #'s.

Cooler Temps (Raw Measured) °C Cooler 1 (1 8)

Cooler Temps (Corrected) °C: Cooler 1 (3 1)

Cooler Security	Y or N		Y or N
1 [illegible] Seals Present	✓	3 COC Present	☑ ☐
2 Custody Seals Intact	✓	4 Smpl Dates/Time OK	☑ ☐

Cooler Temperature	Y or N
1 [illegible] delivered	✓
2 Cooler temp verification	IR Gun
3 Cooler media	Ice Bag
4 No Coolers	1

Quality Control Preservation	Y or N	N/A
1 Trip Blank present / cooler		✓
2 Trip Blank listed on COC		✓
3 Samples preserved properly	✓	
4 VOCs headspace free		✓

Sample Integrity - Documentation	Y or N
1 Sample labels present on bottles	☑ ☐
2 Container labeling complete	☑ ☐
3 Sample container label / COC agree	☑ ☐

Sample Integrity - Condition	Y or N
1. Sample recvd within HT	☑ ☐
2 All containers accounted for	☑ ☐
3 Condition of sample	Intact

Sample Integrity - Instructions	Y or N	N/A
1. Analysis requested is clear	☑ ☐	
2 Bottles received for unspecified tests	☐ ☑	
3 Sufficient volume recvd for analysis	☑ ☐	
4 Compositing instructions clear	☐ ☐	☑
5 Filtering instructions clear	☐ ☐	☑

Comments

Note: Cooler 1 (1 8)

7.1

MC50802: Chain of Custody
Page 2 of 2

SGS Accutest

Internal Sample Tracking Chronicle

SGS Accutest New England

Job No: MC50802

ENVTRAC: Maggiore Somerville, 343 - 351 Summer Street, Somerville, MA
Project No: 03.990202.00

Sample Number	Method	Analyzed	By	Prepped	By	Test Codes
MC50802-1 Collected: 26-JUN-17 14:05 By: LM S-14 ~ 10.5'		Received: 27-JUN-17 By: DDH				
MC50802-1	SW846 6010C	30-JUN-17 11:03	ND	29-JUN-17	RM	PB

7.2

Page 1 of 1

QC Evaluation: MA MCP Limits

Job Number: MC50802
Account: SGS Accutest New England
Project: ENVTRAC: Maggiore Somerville, 343 - 351 Summer Street, Somerville, MA
Collected: 06/26/17

QC Sample ID	CAS#	Analyte	Sample Type	Result Type	Result	Units	Limits

No Exceptions found.

* Sample used for QC is not from job MC50802

Metals Analysis

QC Data Summaries

(SGS Accutest New Jersey)

Includes the following where applicable:

- Method Blank Summaries
- Matrix Spike and Duplicate Summaries
- Blank Spike and Lab Control Sample Summaries
- Serial Dilution Summaries

BLANK RESULTS SUMMARY
Part 2 - Method Blanks

Account: ALNE - SGS Accutest New England
Project: ENVTRAC: Maggiore Somerville, 343 - 351 Summer Street, Somerville, MA

QC Batch ID: MP1680 Methods: SW846 6010C

Prep Date: 06/29/17

Aluminum	51	2.4	5.3		
Antimony	2.0	.22	.38		
Arsenic	2.0	.14	.26		
Barium	20	.061	.18		
Beryllium	0.20	.01	.05		
Bismuth	2.0	.26	.5		
Boron	10	.29	1.3		
Calcium	510	.45	43		
Cobalt	5.1	.02	.071		
Copper	2.6	.071	.4		
Iron	51	.31	4.7		
Lead	2.0	.16	.35	0.031	<2.0
	510	2.6	14		
	1.5	.02	.089		
	2.0	.031	.16		
	4.1	.051	.25		
	10	.15	4.1		
	1000	10	31		
	2.0	.29	.66		
	20	.19	2.6		
	0.51	.082	.29		
	1000	2.7	14		
	5.1	.02	.97		
Sulfur	10	.34	3		
	1.0	.19	.41		
	10	.092	2.6		
	1.0	.061	.27		
	5.1	.16	1.2		

8.1.1

Part 2 - Method Blanks

Login Number: MC50802
Account: ALNE - SGS Accutest New England
Project: ENVTRAC: Maggiore Somerville, 343 - 351 Summer Street, Somerville, MA

QC Batch ID: MP1680 Methods: SW846 6010C

Prep Date: 06/29/17

				MB	
	RL	IDL	MDL	raw	final

Associated samples MP1680: MC50802-1

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(anr) Analyte not requested

8.1.1

Metal	[illegible] Result	[illegible]	QC Limits	[illegible] Result	Spikelot [illegible]	QC Limits
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Vanadium	[illegible]					
Zinc	[illegible]					

8.1.2 8

Prep Date: 06/29/17 06/29/17

Metal	[illegible] Result	[illegible]	QC Limits	LCS Result	[illegible]	[illegible]
Zirconium						

Associated samples MP1680: MC50802-1

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(anr) Analyte not requested

8.1.2 8

Login Number: MC50802
Account: ALNE - SGS Accutest New England
Project: ENVTRAC: Maggiore Somerville, 343 - 351 Summer Street, Somerville, MA

QC Batch ID: MP1680 Methods: SW846 6010C

Metal	BSP Result	Spikelot MPSPK2	% Rec	QC Limits
Aluminum	anr			
Antimony	anr			
Arsenic	anr			
Bismuth				
Calcium	anr			
Chromium	anr			
Cobalt	anr			
Copper	anr			
Iron	anr			
Lead	179	192	93.1	80-120
Magnesium	anr			
Manganese	anr			
Molybdenum				
Nickel	anr			
Selenium	anr			
Silicon				
Silver	anr			
Sodium	anr			
Sulfur				
Thallium	anr			
Tin				
Tungsten				
Vanadium	anr			

8.1.2 8

Login Number: MC50802
Account: ALNE - SGS Accutest New England
Project: ENVTRAC: Maggiore Somerville, 343 - 351 Summer Street, Somerville, MA

QC Batch ID: MP1680 Methods: SW846 6010C

Prep Date: 06/29/17

Metal	BSP Result	Spikelot MPSPK2	% Rec	QC Limits
Zirconium				

Associated samples MP1680: MC50802-1

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(anr) Analyte not requested

8.1.2 8

8.1.3

8

Page 1

JG45809-5 QC
Original SDL 1:5 %DIF

Associated samples MP1680: MC50802-1

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(anr) Analyte not requested

8.1.3

8

Page 2

APPENDIX C

EnviroTrac
Environmental Services

Massachusetts Department of Environmental Protection
Bureau of Waste Site Cleanup

BILL OF LADING Transport Log Sheet #24

Page 13 OF 16

Release Tracking Number: 3 - 34098

I. LOAD INFORMATION:

Load 1:
Signature of Transporter Representative: [signature]
Date of Shipment: 6/26/17
Time of Shipment: ☑ AM ☐ PM
Truck/Tractor Registration: 29517
Trailer Registration (if any): 2447569
Receiving Facility/Temporary Storage Representative: ARC RWebber
Date of Receipt: 6/26
Time of Receipt: 10:38 ☒ AM ☐ PM
Load Size (cu. yds./tons): 35.44

Load 2:
Signature of Transporter Representative: [signature]
Date of Shipment: 6/26/17
Time of Shipment: ☐ AM ☑ PM
Truck/Tractor Registration: 29317
Trailer Registration (if any): 2447369
Receiving Facility/Temporary Storage Representative: ARC RWebber
Date of Receipt: 6/26
Time of Receipt: 2:17 ☐ AM ☒ PM
Load Size (cu. yds./tons): 33.53

Load 3:
Signature of Transporter Representative:
Date of Shipment:
Time of Shipment: ☐ AM ☐ PM
Truck/Tractor Registration:
Trailer Registration (if any):
Receiving Facility/Temporary Storage Representative:
Date of Receipt:
Time of Receipt: ☐ AM ☐ PM
Load Size (cu. yds./tons):

Load 4:
Signature of Transporter Representative:
Date of Shipment:
Time of Shipment: ☐ AM ☐ PM
Truck/Tractor Registration:
Trailer Registration (if any):
Receiving Facility/Temporary Storage Representative:
Date of Receipt:
Time of Receipt: ☐ AM ☐ PM
Load Size (cu. yds./tons):

Load 5:
Signature of Transporter Representative:
Date of Shipment:
Time of Shipment: ☐ AM ☐ PM
Truck/Tractor Registration:
Trailer Registration (if any):
Receiving Facility/Temporary Storage Representative:
Date of Receipt:
Time of Receipt: ☐ AM ☐ PM
Load Size (cu. yds./tons):

Load 6:
Signature of Transporter Representative:
Date of Shipment:
Time of Shipment: ☐ AM ☐ PM
Truck/Tractor Registration:
Trailer Registration (if any):
Receiving Facility/Temporary Storage Representative:
Date of Receipt:
Time of Receipt: ☐ AM ☐ PM
Load Size (cu. yds./tons):

J. LOG SHEET VOLUME INFORMATION:

Total Volume Recorded This Page (cu. yds./tons): 68.97
Total Carried Forward (cu. yds./tons): 786.27
Total Carried Forward and This Page (cu. yds./tons): 855.24

Aggregate Recycling Corporation
PO Box 363
434 Dow Highway
Eliot, ME 03903
PH: 207-439-5584 FAX: 207-439-5586

SITE	TICKET	
AR	54827	RODW

DATE IN	DATE OUT	VEHICLE	DESCRIPTION / CONTAINER
10:38 am 06/26/17	10:56 am 06/26/17	Other	

REFERENCE	217-06-09 351 Summer LLC
LUMBARDO 24	351 Summer LLC 343-351 Summer Street Somerville, MA

1397
Maggiore Construction Corp.
Matthew Maggiore
13 Wheeling Avenue
Woburn, MA 01801

GROSS:	105340 lbs	Scale In	Invoice
TARE:	34460 lbs	Scale Out	Inbound
NET Wt:	70880 lbs		

QUANTITY	UNIT	DESCRIPTION	RATE	TOTAL
35.44	**TN**	**Soil**		
1.00		**State of Maine Fee - $2 per Ton**		

NET TOTAL	
TENDERED	
CHANGE	
CHECK NO.	

Thank you for your business!
Mon - Fri 7:30am to 4:30pm Spring/Summer
Mon - Fri 7:30am to 4:00pm Fall/Winter

SIGNATURE:

APPENDIX D

EnviroTrac
Environmental Services

EnviroTrac
Environmental Services

August 8, 2017

Mayor Joseph A. Curtatone
City of Somerville
City Hall
93 Highland Avenue
Somerville, Massachusetts 02143

Subject: **Notice of Availability - Permanent Solution Statement**
343-349 Summer Street
Somerville, Massachusetts
MassDEP RTN 3-33735

Dear Mayor Curtatone:

In accordance with the Massachusetts Contingency Plan (MCP), as set forth at 310 CMR 40.1403(3)(f), notification is hereby made that a Permanent Solution Statement were submitted to the Massachusetts Department of Environmental Protection (MassDEP) for the subject property.

A copy of the PSS and RAMC Statement can be obtained directly from the MassDEP Waste Site / Reportable Release Look Up web site at http://public.dep.state.ma.us/fileviewer/Rtn.aspx?rtn=3-0033149 or from EnviroTrac by calling (781) 793-0074 or by sending a request in writing to my attention at 2 Merchant Street, Suite 2, Sharon, MA 02067.

Sincerely,
EnviroTrac Ltd.

Robert H. Bird, LSP
Principal Hydrogeologist

Copy: MassDEP NERO

Environmental Services

Board of Health
City of Somerville
City Hall Annex
50 Evergreen Avenue
Somerville, Massachusetts 02145

Subject: **Notice of Availability - Permanent Solution Statement**
343-349 Summer Street
Somerville, Massachusetts
MassDEP RTN 3-33735

To Whom It May Concern:

In accordance with the Massachusetts Contingency Plan (MCP), as set forth at 310 CMR 40.1403(3)(f), notification is hereby made that a Permanent Solution Statement were submitted to the Massachusetts Department of Environmental Protection (MassDEP) for the subject property.

A copy of the PSS and RAMC Statement can be obtained directly from the MassDEP Waste Site / Reportable Release Look Up web site at http://public.dep.state.ma.us/fileviewer/Rtn.aspx?rtn=3-0033149 or from EnviroTrac by calling (781) 793-0074 or by sending a request in writing to my attention at 2 Merchant Street, Suite 2, Sharon, MA 02067.

Sincerely,
EnviroTrac Ltd.

Robert H. Bird, LSP
Principal Hydrogeologist

Copy: MassDEP NERO

APPENDIX E

EnviroTrac
Environmental Services

RESPONSE TO COMMENTS ON DRAFT RAM PLAN

343-351 SUMMER STREET
SOMERVILLE, MASSACHUSETTS
RTNs 3-33735 AND 3-34098

July 11, 2017

A release of oil and/or hazardous materials has occurred at this location, which is a disposal site as defined by M.G.L. c. 21E, §2 and the Massachusetts Contingency Plan, 310 CMR 40.0000. On March 8, 2017, 351 Summer LLC received a petition from residents in Somerville requesting public involvement in any Immediate Response Actions and/or Release Abatement Measures taking place at this disposal site, in accordance with M.G.L. c. 21E §14(a) and 310 CMR 40.1403(9).

A draft Release Abatement Measure (RAM) Plan was made available for review and comment on May 19, 2017. As required by the MCP (310 CMR 40.1304(9)), a 20-day public comment period was provided and scheduled to close on Wednesday, June 7, 2017 at 11:59 pm. This comment period was extended to June 11, 2017 by 351 Summer LLC. The public comments received during this period were considered, and where relevant and appropriate, incorporated into the final Release Abatement Measure Plan submitted by 351 Summer LLC to MassDEP on June 19, 2017.

The following individuals provided written comments during the comment period:

Name	Initials	Comment Date
Marc Maxwell	MM	June 8, 2017
Joseph Tierney	JT	June 10, 2017
Bob Dempkowski	BD	June 11, 2017
Nancy Iappini	NI	June 11, 2017
Karina Wilkinson and Roger Schwarzschild	KW/RS	June 11, 2017
Catherine Guthrie	CG	June 11, 2017
Tomas Bok	TB	June 11, 2017
George O'Shea	GO	June 11, 2017

Following the public comment period, the MCP (310 CMR 40.1403(9)(c)(4)) provides for a 30-day period for 351 Summer LLC to provide a written summary of, and response to, the public comments. This response period ends July 11, 2017.

Presented below is the written summary of the public comments received during the public comment period (May 18 through June 11, 2017) and the response to relevant comments in blue text Where similar, comments have been grouped to facilitate a response, which is provided immediately below the similar comments. Along with each summary, the commenter's initials have been included for reference. Copies of the comments received are attached.

SCOPE OF RAM PLAN

- *(JT) The remediation work described in the RAM describes the work in response to RTN 3-33753 as a result of a damaged underground storage tank, (e.g. removal and testing of 8,000 cubic yards of contaminated soil), but what is the detailed response to RTN 3-34098 and the measured contamination at 351 Summer?*

  As stated in Section 1.0 of the final RAM Plan, the RAM Plan applies to both RTN 3-33735 and 3-34098.

DUST MONITORING AND MITIGATION

- *(MM) How the hazardous and non-hazardous materials will be excavated from the site and the amount of dust, mud and debris that may be made friable, liquid or dry dust limited from migrating off the site. How will such potentially hazardous dust and debris be controlled?*
- *(MM) What procedures will be put in place to assure that proper dust, mud and debris mitigation is in fact the rule on the site to minimize exposure to the neighborhood?*
- *(MM) What procedures and compliance methods will be put in place to keep dust, dirt, mud and potential water run-off from migrating onto the public streets and sidewalks surrounding the site? Who and how should we inform in case we have concerns or evidence of non-compliance or unintended dust or run-off?*

Dust monitoring procedures and mitigation methods are described in the Dust Monitoring Plan included as Appendix C to the final RAM Plan. The Soil Management Plan, included as Appendix A to the final RAM Plan, describes procedures to prevent the transport of soil on truck tires to the public roadways. Contact information for the Responsible Party and Massachusetts Licensed Site Professional is included in Section 4.0 of the final RAM Plan. In addition, a toll free number has been established by the developer to serve as a clearinghouse for project-related questions. That number was distributed to the project mailing list by email on June 18, 2017.

- *(NI) Appendix C Dust and Vapor Monitoring Plan - Do not offer much about dust control and protection to the residents.*
  1. *What will be done on a windy day?*

Dust monitoring and mitigation, if necessary, will be conducted as described in the Dust Monitoring Plan.

2. *What type of barrier will be put up to protect families especially abutters at the rear shared lot line?*

Installation of a barrier to dust migration is not feasible and is not proposed. No barrier can stop wind and potential dust migration, it can only be redirected. The approach taken in the RAM Plan is to mitigate dust generation through wetting and monitor the effectiveness using appropriate methodology. This approach is described in the Dust Monitoring Plan included as Appendix C to the RAM Plan.

3. *Are vapors expected to be a problem for this site? Do they exist? Will they occur?*
4. *Why is the word "Vapor" not included in the title of this attachment? What vapors are expected, as noted in 3.0 Mitigation Measures on p.2?*

Based on the site investigations conducted to date, volatile organic compounds (VOC) which might lead to the presence of vapors have not been detected in soil or groundwater at concentrations which might pose a risk to human health. Therefore, a specific vapor monitoring program is not warranted. However, routine screening of excavated soil is conducted using a photoionization detector out of an abundance of caution.

5. *Page 1, 1.0 - Please provide a more specific 'schedule for work to be conducted' at the site in the RAM*

A RAM implementation schedule is provided in Section 4.4 of the RAM Plan. A specific start date is provided. Following project start, specific project dates cannot be determined due to variations in weather, subcontractor availability, disposal facility daily volume limits, etc.

6. *Please describe how the water or foam is applied to suppress vapor and dust?*

The actual process of water or foam application is not relevant to the RAM Plan, only that the dust or foam effectively wets the soil surface to minimize soil to air contact and the generation of airborne, dust-size particles.

7. *We request that neighbors/DEP be timely informed of the perimeter monitoring levels for air and dust and vapors. What is considered an elevated dust particle concentration? What is considered an elevated vapor concentration?*
8. *Would vapor reduction measures along the rear property line be included? If not, please explain why not. If so, please state what they will be and who is in charge of running them and reporting on their results;*

As described in the Dust Monitoring Plan, average PM-10 dust concentration readings will be recorded periodically through each day of excavation and site work. A dust monitoring action level, as described in the Dust Monitoring Plan, of 150 ug/m^3 has been adopted and will trigger mitigation measures if achieved. As volatile organic compounds have not been detected in soil or groundwater on-site at significant concentrations, no vapor monitoring program was proposed. However, routine monitoring of excavated soil for volatile vapors will be conducted out of an abundance of caution.

9. *Section 1.1 Dust monitoring - Hours of site work are suggested to be 7 am to 5 pm daily except Sundays. If site work results in dust moving around up till, for example, 5 pm daily, but monitoring is stopped at 5 pm because the workers are done for the day, will the dust take time to settle? If so we request monitoring during that settle period. Will work cease before 5 pm to stop dust movement? How can watering down get particles that have not yet settled if workers depart?*

Dust monitoring procedures and mitigation methods are described in the Dust Monitoring Plan included as Appendix C to the final RAM Plan. The Soil Management Plan included as Appendix A to the final RAM Plan, describes procedures to prevent the transport of soil on truck tires to the public roadways. Contact information for the Responsible Party and Massachusetts Licensed Site Professional is included in Section 4.0 of the final RAM Plan. In addition, a toll free number

has been established by the developer to serve as a clearinghouse for project-related questions That number was distributed to the project mailing list by email on June 18, 2017.

- *(KW RS) In the Dust Monitoring Plan (Appendix C, 2.1 Daily Monitoring), it needs to be clarified that daily monitoring will take place during excavation as well as for "the duration of construction." As air samples will be taken daily, they should include tests for ground-level ozone and fine particulate matter to determine whether the work is bring the neighborhood to unhealthy levels as discussed in point 4.*

Air monitoring for the presence of ground-level ozone and fine-particulates are not regulated under MGL c 21E and the Massachusetts Contingency Plan (MCP) and are not included in the Dust Monitoring Plan provided as Appendix C of the RAM Plan.

- *(TB) As the parent of 2 young children, I am concerned about the potential for hazardous compounds from the site to affect my property during excavation and transportation of contaminated soil. I want to inquire about the safe transportation of soils containing carcinogens such as benzo(a)pyrene. As dump trucks load at the site and drive past my house, what measures will will be in effect to control/contain dust and contaminants from the soil so that they don't end up in my yard where my children play? And with all of the vehicle traffic and the need to wash tires of every vehicle, what measures will be used to prevent contaminants from migrating to the street, sidewalk, and gutter?*
- *(JT) Appendix D, "Focused Risk Assessment," is aimed at protecting workers on-site at 343-351 Summer Street. Where are similar descriptions of the precautions that need to be taken to protect abuttors on Hawthorne and Summer Streets, during the construction period and following?*

Dust monitoring procedures and mitigation methods are described in the Dust Monitoring Plan included as Appendix C to the final RAM Plan. The Soil Management Plan, included as Appendix A to the final RAM Plan describes procedures to prevent the transport of soil on truck tires to the public roadways Contact information for the Responsible Party and Massachusetts Licensed Site Professional is included in Section 4 0 of the final RAM Plan In addition, a toll free number has been established by the developer to serve as a clearinghouse for project-related questions That number was distributed to the project mailing list by email on June 18, 2017.

SOIL MANAGEMENT

- *(MM) Will a washing station be provided on site for hosing down wheels and undercarriages of trucks and equipment leaving the site?*
- *(MM) How will dirty, muddy, soil rich or contaminated water be handled from the site (either from a washing station or simply from rain) without running into Summer Street, gutters and curbs, and the surrounding storm drainage system?*
- *(MM) Will hazardous or contaminated materials ever be excavated and stored on site? If so, what measures will be taken to assure minimal exposure to residents abutting the site or pedestrians traversing the neighborhood?*

The Soil Management Plan, included as Appendix A to the final RAM Plan describes procedures to prevent the transport of soil on truck tires to the public roadways as well as the procedure to be followed for the temporary on-site stockpiling of soil pending off-site transportation and disposal.

- *(JT) The amount of soil to be remediated because of the presence of Lead (level on 351 Summer at 431 mg/kg), and benzo(a)pyrene (level on 351 Summer at 2.7mg/kg) by supervised removal to approved off-site locations is not clearly spelled out. At the top of page 2 the TMP states: "Therefore, the preliminary Disposal Site Boundary for this RTN encompasses the entirety of both the 343-349 and 351 Summer Street parcels from ground surface to a depth of approximately 15 feet bgs and is depicted on Figure 2. " following up on this statement will produce (at 0.93 acres for the two lots, and a depth of 15 feet), 22,506 cubic yards of soil. If all of this soil needs to be carefully transported elsewhere for disposal it will require (at 15 cubic yards per three axle truckload) 1500 truck trips. Can you please go from that figure and show clearly how it has been determined that only 8,000 cubic yards of soil need to be transported off-site without exposing abuttors, workers on the site, and final occupants of the project, to serious hazard?*
- *(KW/RS) The preliminary Disposal Site Boundary as outlined in Section 2.2 of the RAM for Release Tracking Number (RTN) 3-34098 includes all .93 acres of the two properties and goes to 15 feet down. That encompasses some 22,500 cubic yards of soil, not including the 5 tons that were removed following the oil spill that occurred on 343-349 Summer Street on August 8, 2016. How was it determined that 8,000 cubic yards should be removed? That leaves some 14,500 cubic yards of soil, which contains lead, benzo(a)pyrene and polycyclic aromatic hydrocarbons in reportable concentrations.*
- *(CG) I'd like to reiterate Joseph Tierney's request for clarification on how you got to the 8,000 cubic yards of soil number. Could you please explain?*

Please refer to Section 4 2 of the RAM Plan for information on the volume of soil requiring export and off-site disposal.

- *(NI) p. 6, 4.3.2 – Onsite Reuse, Transport and Reuse, of Off-site Soil Disposal: Will contaminated soil be re used on site?*

Please refer to Section 4 3 2 of the RAM Plan for information on the potential on-site reuse of soil

- *(NI) p. 6, 4.3.3 & 4.4 – Stockpiling, Toxicity Characteristic*
    1. *It appears on Figure 2 Site Plan that close to 30 soil borings were performed but only 14 soil samples submitted for TCLP lead analysis – why, and why were they submitted only for lead since there are other toxins exceeding reportable conditions? Will the complete set of soil samples be submitted for analysis? If they have already been, please share results with neighbors/DEP.*

A detailed description of the TCLP method and application is not relevant to the RAM Plan however the following description is provided for information purposes Toxicity characteristic leaching procedure (TCLP) is a soil sample extraction method for chemical analysis employed as an analytical method to simulate leaching through a landfill The testing methodology is used to determine if a waste is characteristically hazardous, i e classified as one of the "D" listed wastes by the U S Environmental Protection Agency (EPA) The extract is analyzed for substances appropriate to the protocol Since a 20x dilution of solid to liquid is specified in the method only soil analytical results which exceed the TCLP leachate criteria by a factor of 20x can theoretically exceed the TCLP leachate criteria Therefore only lead concentrations in soil greater than 100 mg/Kg can theoretically exceed the lead TCLP leachate criteria of 5 mg/l All of the site soil samples with lead concentrations in soil greater than 100 mg/kg were extracted and testing using

the TCLP method and no lead in TCLP leachate concentrations was greater than 5 mg/l Therefore, none of the site soil is classified as "characteristically hazardous."

2. *Will stockpiling of contaminated soil take place? If so when and for how long? If it is allowed, we request that it be located on 351 Summer Street near the VFW building, not near the rear property line of Hawthorne Street, not near humans and domestic animals.*
3. *Will it be transported offsite; if so at what point, and if not, why not. Will there be onsite reuse of contaminated soil; if so, why and where will the contaminated soil to be reused be located? How is it determined to be safe enough to be below reportable levels? We request sampling of stockpiled soil please and share results with neighbors/DEP.*

- *(NI) 5.2 – Similar Soils Management*
  1. *Has a disposal facility approved under MSRs been identified that will take the soil – who is it?*
  2. *Who determines whether the soil is suitable or unsuitable for construction or redevelopment?*
  3. *How is it determined?*

Please refer to Section 4 3 of the RAM Plan for information on the procedures for on-site soil stockpiling and off-site disposal.

- *(NI) We request that the soil management plan and traffic management plan by Mr. Bird be part of the RAM plan.*

The Soil Management Plan is included in both the draft and final RAM Plans as Appendix A The Traffic Management Plan is not subject to regulation under the MCP and is not included in the RAM Plan The Traffic Management Plan was prepared for the City of Somerville. at the request of the Planning Division and the Traffic and Parking Department The Traffic Management Plan is available electronically on the City of Somerville, Planning Division web site.

- *(GO) Why is only 18 inches of 343-349 to be removed*

The reason for the removal of 18-inches of soil on the 343-351 is not relevant to the RAM Plan as it is based on geotechnical suitability of the soils for paving sub-base.

- *(GO)Since all contaminated soil is not being removed How much contamination will be left at the 343-349 Summer Street*
- *(GO) What is the toxicity of soil left?*

The volume and soil remaining on-site and the concentrations of contaminants in remaining soil are not relevant to the objectives and requirements of the RAM Plan and will be addressed during potential future response actions and documented in potential comprehensive response action submittals and a permanent solution.

TRAFFIC MANAGEMENT

- *(MM) What is the route on and off the site for the myriad of trucks and heavy equipment that will be required to execute this excavation and hazardous material removal? While there are only so many options for public streets surrounding and accessing the site, those of us who live on the small one way surrounding streets fear the traffic, dust and dirt of 400 +/- triple axle dump trucks*

traversing our residential streets. My personal fear is that Windom Street will be used a short cut to turn right on Elm Street, to Cutter to Highland Avenue for trucks headed towards I-93 to the north. Vehicles darting across Summer Street from the Post lot to Windom Street is already a problem.

- *(JT) To preclude three axle trucks from wandering in the vicinity of Powderhouse and Davis Squares and Mystic Avenue, because of the ambiguous or incorrect directions let me offer the following corrections:*
    1. *In the first section "Access route to the project site" line 1. Should indicate Exit 31 South, not Exit 30. Line 3. Should be augmented to indicate "continue straight across Powderhouse Square onto College Avenue" In the section "egress from the project site" line 4. Should read "travel for 0.22 miles to Powderhouse Square". Line 5. Should read "turn right onto Warner Street" I don't believe it is called Harvard St. at that place.*
- *(KW RS) In the TMP, it is stated there will be approximately 400 to 600 truckloads of excess soil (3.2.3) that will be transported from 7am to 3pm, except Sunday. In the "Hours of Operation" section, it is stated that "If work is to be done on Saturdays or state/federal holidays that work shall not begin before 8:00am." The consultant is mistaken about the current construction noise ordinance for the City of Somerville which provides that construction can start no earlier than 9am on Saturdays, and no work can be done on holidays.*
- *(KW/RS) Diesel truck trips contribute to air pollution. We request that no truck trips take place during the weekday rush hour from 7am to 9am. Rush hour will increase the time it takes for the trucks to get to the site and, therefore, increase the concentrations of ground-level ozone and fine particulate matter generated by the trucks. Both ozone and particulate matter are regulated by the Clean Air Act, because they negatively impact the health of people with respiratory problems, including asthma, and particulate matter additionally negatively impacts the health of people with heart disease. The EPA has set a standard for "Good" air quality at an Air Quality Index (AQI) from 0 to 50 for both ozone and particulate matter. Because of the likelihood that 15 to 30 truck trips per day will contribute to ground-level ozone and particulate matter (assuming that the transport is distributed evenly over the 20 to 30 work days), we request that no trips be allowed on days when the DEP is forecasting an AQI above 50 for either ozone or particulate matter, since the truck exhaust could push the area from "Moderate" (51 to 100) into "Unhealthy for Sensitive Individuals" (101 to 150) or "Unhealthy" (151 to 200).2 Also, the soil excavation itself will contribute dust particles on top of the diesel exhaust from the trucks. Without conducting a systematic survey of the neighbors, we are nevertheless aware of 6 neighbors within approximately 350 feet of the location with asthma or respiratory problems. Three of them are children and one senior adult has severe asthma.*
- *(KW/RS) At peak staffing, where will the construction workers' vehicles be parked? What commitment is the developer willing to make beyond "encouraging carpooling"? (TMP 3.2.1)*
- *(KW RS) Where will the trucks be staged for deliveries? The TMP outlines an area in Medford to stage the trucks for the soil excavation but does not mention where the delivery trucks will be staged. Trucks should not be allowed to idle. We request that deliveries be on a "just in time" basis to the site and there be limitations on the timing of deliveries to avoid peak traffic periods. (3.2.2)*
- *(CG) I'd also like to underscore Karina Wilkinson's request that construction abides by the City's noise ordinance of starting no earlier than 9am on Saturdays and no work on holidays. And that no truck trips take place during morning rush hour, from 7am to 9am. Per the traffic management plan, the trucks will exit down Willow Ave or (worse) through the middle of Davis Square to reach Dover. Both routes are typically extremely busy during rush hour leading to multi-block back ups. Running trucks during morning rush hour will result in idling as the trucks*

inevitably sit in morning traffic. The City could easily avoid this scenario by limiting the hours drivers are allowed to make trips.

The Traffic Management Plan and potential air pollution associated with vehicle traffic are not subject to regulation under the MCP and, as such, are not addressed in the RAM Plan. The Traffic Management Plan was prepared for, and approved by, the City of Somerville Planning Division and the Traffic and Parking Department. The Traffic Management Plan is available electronically on the City of Somerville, Planning Division web site.

HEALTH AND SAFETY PLAN

- *(NI) Page 8 references potential heat stress conditions in warmer weather. Please tell me how your work plan and mitigation techniques help my dom estic pets (and m e and my family when we are home during site activities) with heat stress when we have to be in an enclosed indoor environment due to the clean up?*

The Health & Safety Plan and mitigation techniques presented in the RAM Plan are relevant only to on-site workers.

PROJECT CONTACTS AND RESPONSIBILITY

- *(MM) Who will insure compliance with approved procedures?*
- *(MM) Who will be our contact to report issues we feel make the neighborhood unsafe during this process of excavation and hazardous material removal?*
- *(JT) What entity is responsible for seeing that procedures of the RAM are followed? Is it the responsibility of: Robert H. Bird LSP No. 8972, 351 Summer LLC the owner, or the City of Somerville? The neighborhood has already observed many truckloads of uncovered contaminated soil from 343-349 Summer traveling through our streets last August (and September?).*
- *(JT) Who will supervise day to day monitoring of the "Dust Monitoring Plan" in appendix C of the RAM (page 177/284 and following)?*
- *(JT)Who will initiate the "Mitigation Measures" that are specified in appendix C when monitoring shows non-compliant measurements?*
- *(JT) Who determines that the "Mitigation Measures" have been successful and work can resume?*
- *(JT) If violations of procedures described in the RAM plan are observed by abuttors and neighbors of this project, who or what agency can be addressed for immediate and effective action?*
- *(JT) On page 6 Section 6.0 Project Contacts, the following is stated: "The list of contact names and numbers will be submitted to, and maintained with, the Planning Department and the Ward Alderman prior to the start of construction. " Please see that this list is circulated at least to site abuttors if not the entire neighborhood before excavation begins so that any complaints may be dealt with in a way that minimizes danger to all involved.*
- *(NI) 4.4 - Implementation schedule –*
    1. *Could timely notifications be provided to neighbors before site activities take place, so that we can shut our windows, expect activity or noise, watch for dust or take precautionary measures, etc. Summer 2017 is too vague a start date. Please also provide notification to neighbors/DEP when RAM activities end.*

2. *Please provide contact information for questions or concerns from neighbors or in the event of an emergency. Who is the Project Manager?*

- *(CG) Will you give us and our neighbors the name and phone number of the site manager (or whoever is on call) so that we can call – and speak to a real person -- with concerns if, for instance, site work starts too early, goes on too late, or trucks leave the site uncovered?*
- *(CG) Likewise, can you please provide us and our neighbors with the name and direct number for the City employee whose job it is to oversee that this project and this developer is in compliance?*
- *(TB) How will the transportation company be monitored to ensure compliance with the stipulations of the plan? Will they be required to hold special licenses or certification for proper handling of contaminated soil?*
- *(TB) Who is supervising the RAM and cleanup process? Who can we contact in the event that we have questions or want to report issues?*
- *(GO) Who has liability for 343 and 351 currently? Who will have liability after issuance of a building permit? Who has indemnity for 343 and 351 currently? Who will have lliabiliy after issuance of a building permit?*
- *(CG) Who is in charge of the dust monitoring plan?*

Contact information for the Responsible Party and Massachusetts Licensed Site Professional are included in Section 4 0 of the final RAM Plan. In addition, a toll free number [(877) 732-8997] has been established by the developer to serve as a clearinghouse for project-related questions and/or concerns. That number was distributed to the project mailing list by email on June 18 2017.

GROUNDWATER FLOW AND CONTAMINANT TRANSPORT

- *(MM) The neighborhood has asked repeatedly and never been given an understandable answer as to how the MBTA tunnel affects site drainage, surface or underground, and how this has been figured into the site excavation, drainage, contaminated soil or hazardous material handling, removal, storage or transportation from the site.*
- *(TB) In 2011, Mr Nangle recommended groundwater analysis to determine the flow of groundwater. Has this analysis been completed per his suggestion? What assurance can be provided that contaminants are not leaching into the groundwater beneath our neighborhood?*

The specific impact of the MBTA tunnel on site drainage is not relevant to the implementation of the RAM Plan. The RAM Plan objective is to manage soil requiring off-site export for construction purposes in accordance with the requirements of the MCP. No site-related contaminants have been measured in groundwater at concentrations exceeding MCP reportable concentrations. Final evaluation of potential groundwater transport will be presented in a future Permanent Solution report.

GPR SURVEY AND UNDERGROUND STORAGE TANKS

- *(JT) How will the results of the "ground penetrating radar" studies reported on in the RAM plan, which show several possible sites that may contain old underground storage tanks, be acted upon to prevent long term leakage and continuing contamination? Can someone provide us with a layperson's explanation of what was in that report? How can we be confident that all substantial remaining UST's are either non-existent or not leaking?*

- *(NI) How do we know that there are no USTs in that location in absence of GPS performed along the shared lot line of 36 Hawthorne Street and 343-349 Summer Street?*
- *(CG) What will be done if another underground storage tank is breached during excavation? Will we be alerted? If so, when and how?*

Descriptions of the GPR survey and results, as well as procedures to investigate potential GRP signatures, are described in Sections 4.3.5 and 4.3.6, respectively, of the RAM Plan

SITE ASSESSMENT AND RISK CHARACTERIZATION

- *(JT) Since lead at 431 mg/kg and benzo(a)pyrene at 2.65 mg/kg are serious soil contaminants with severe public health consequences, why are there no additional measurements to be made concerning possible contamination that may be affecting abuttors along the northern boundary with Hawthorne Street, and the eastern boundary on Summer Street?*
- *(JT) The development about to be undertaken at 343-351 Summer Street involves very serious soil contamination that needs remediation to protect: residential abuttors and neighbors; on-site workers and; future residents of the new housing units. These dangerous conditions must be successfully alleviated where success is defined as "soil contamination well under standard accepted environmental safety levels.*
- *(BD) At the community meeting at the Kennedy Elementary School on May 17, it was explained that no soil testing had been conducted near the northern boundary of the property adjacent to residential properties because the brush had been too thick at the time of the surveys. (This area is marked as Brush Too Thick For Survey on the map on p. 284 of the Release Abatement Measure Plan.) In the meantime, the brush had been cleared from the site. After discussion at the meeting, there was general consensus that additional testing should be conducted in this area. Please assure that additional soil testing occurs in this area, and that results are shared with the community prior to any additional site work.*
- *(NI) We request groundwater, soils and GPS testing at rear lot line location (shared lot line of 36 Hawthorne and 343-349 Summer because the location is clearly a sensitive area relative to human health as per DEP standards.*
    1. *Please test 36 Hawthorne Street, rear lot line*
    2. *Please test both sides of the shared lot line of 343-349 Summer and 36 Hawthorne with Ground Penetrating Radar and groundwater monitoring and testing*
- *(NI) How can it be determined that said standards have been reached when a large portion of the land has not been included in the assessment?*
- *(NI) How do we know the shared lot line area on either side is not a Hot Spot?*
- *(NI) Page 10, 11.3 – Planned remedial activities to excavate impacted areas and dispose of impacted soil have omitted the soil along the shared lot line of 36 Hawthorne Street and 343-349 Summer Street. Please include the soil at the shared lot line in any testing or removal.*
- *(NI)Why is the disposal site boundary considered 'preliminary' on both RTNs? What could change about these boundaries and why?*
- *(KW RS) We request further testing of the soil near the adjacent houses on Hawthorne Street, as has been requested by some of the neighbors.*
- *(CG) We request further soil testing as has been requested by some of our neighbors.*

Delineation of the extent of contamination and evaluation of the total site risk posed to human health public safety welfare and the environment have not been completed and are not relevant to this RAM Plan The RAM Plan is focused on the management of soil requiring export for construction purposes Additional site investigations and/or soil remediation if necessary to mitigate risk to human health. will be conducted prior to submittal of a Permanent Solution and documented therein.

For general information it is important to note that groundwater flow on the subject property is generally southerly, from Hawthorne Street towards Summer Street. and away from the Hawthorne Street residences. Analyses of groundwater samples collected from site monitoring wells on two (2) occasions. has not identified any site-related contaminants at concentrations exceeding MCP reportable concentrations or Method 1 risk standards. This provides strong evidence that the soil contamination present on-site is not leaching to groundwater and migrating to any other location.

Furthermore for the soil contamination present on site to pose a risk to human health. a pathway to exposure must exist. The most significant exposure pathways for soil contamination such as that present on-site is either ingestion or inhalation. The property is fenced to prevent access. so Ingestion is unlikely. and dust mitigation and monitoring is being employed to eliminate the inhalation risk.

- *(KS/RS) The RAM plan states (4.3.4) that 14 soil samples were tested using "Toxicity Characteristic Leaching Protocol" under the Resource Conservation and Recovery Act (RCRA) and none of the results met the "hazardous waste criteria of 5.0 mg/l in TCLP leachate." Nevertheless, Table 5 shows that soil bore test B102 had a level of 431 mg/kg which exceeds the Environmental Protection Agency's (EPA) lead hazard standard for children under 6 years old, which is 400 parts per million.1 The City of Somerville, the Massachusetts Department of Environmental Protection (DEP), the developer and consultants should proceed with a plan that acknowledges that the soil is hazardous to children under 6 years old, according to the EPA hazard standard.*

The application of the EPA Lead Hazard Standard for Children under 6 years old is not relevant to the RAM Plan objective of construction soil export Furthermore, the EPA standard applies to 'play areas of bare residential soil ' Prior to site closure, the site will be evaluated using the MassDEP risk characterization process. which includes a potential residential child exposure to the soil As a point of reference the MCP Method 1 risk standard for lead in residential soil is 200 mg/kg or one-half the EPA Lead Hazard Standard To achieve a Permanent Solution and site closure under the MassDEP regulations the site must meet a condition of 'No Significant Risk' for current and future activities and uses.

FOCUSED RISK ASSESSMENT

- *(NI) Questions correlated to Appendix D - Focused Risk Assessment in Support of Construction Release Abatement Measure:*
    1. *Tables on Page 3 has show the Hazard Index and Excess Lifetime Cancer Risk for a construction worker, a potential future resident, and a potential future trespasser. It is concerning to note that the future resident has 4x the cancer risk and hazards of the construction worker. Yet Mr. Bird's plans address only the construction worker.*

2. *a) Why is nothing stated in this plan about existing butters and neighbors of close proximity? Please provide the same cancer risk information for abutters and neighbors of close proximity. What are our risk assessment numbers for HI and ELCR?*

The Focused Risk Characterization is just that, focused on the short-term risks within and adjacent to the building footprint and to construction workers, surrounding populations and future occupants. Evaluation of the long-term risk to abutters and neighbors is not relevant to the RAM Plan and will be performed and incorporated in future MCP submittals and/or a Permanent Solution.

- *(KW/RS) In the Focused Risk Assessment's Data Usability Assessment Conclusion section (Appendix D, 5.7.1), it says that "it is the opinion of the Licensed Site Professional named herein that the analytical data obtained from samples collected during investigations associated with RTN 3-33735 and considered in the risk characterization meet CAM requirements," that is, the Compendium of Analytical Methods. RTN 333735 relates to 343- 349 Summer Street. RTN 3-0034098 covers 343 - 351 Summer Street. Where is the assurance that the data "to support this risk characterization," that is [No Significant Risk], includes 351 Summer Street?*

RTN 3-34098 has been added to Section 5.7.1 of the Focused Risk Characterization included as Appendix D of the RAM Plan.

IMMEDIATE RESPONSE ACTION

- *(NI) If 5 tons of soil was removed, why is there more to be removed?*
- *(NI) What are the dimensions of the oil spill causing the IRA? Are the limits of the plume area indicated in the RAM plan? If so, where, and, if not, could Mr. Bird please provide this information.*
- *(NI)Please explain what the green area (called test pits in Figure 2 legend) is. What was tested? Please explain what the circled area is (called preliminary disposal site). Is the green area in figure 2 where the oil spilled? Is the green area in figure 2 the extent of oil spill contamination?*
- *(GO) What depth underground was UST when struck on 343?*
    1. *how far northwards did the oil release spill ?*

The details of the Immediate Response Action (IRA) are included in the IRA Plan and Completion Statement submitted to MassDEP on March 16, 2017.

MISCELLANEOUS

- *(NI) 10.0 Other info – We request that, upon review of the initial draft RAM plan, the Mass DEP review and identify any other information or suggestions to help ensure health and safety for the neighbors and families regarding this clean up.*
- *(CG) Because our property (48 Hawthorne Street) abuts the construction site, we will undoubtedly be covered in dust before this project is complete. (I understand that you will wet the soil as it is removed but surely this will not prevent dust, dirt, and grime from spreading.) Will the developer establish an account with a local exterior home and window cleaning company with enough funds set aside so that those with property abutting the site can have their exteriors, including windows, cleaned afterward.*
- *(CG) Finally, can we have the developer's assurances that he will not cut down the trees growing on our back property line, shared with the VFW parking lot? The trees provide shade as well as a*

much-appreciated visual buffer. With 29 condos being constructed a few feet from our house, we will soon be staring into the living quarters of dozens of new residents. For their sake and for ours, the trees provide a priceless sense of privacy in what is a stressful, cheek-to-jowl urban environment. Plus, they are habitat for the birds and squirrels that populate our back yard. I would like to meet with the developer personally, show him the trees, and get his assurances that the trees will not be taken down. I would like for the trees to be clearly marked with either tape or ribbons so that workers don't "accidentally" take them down

The above comments are not relevant to the RAM Plan and no modification to the plan was made

- *(KW/RS) Why was a Notice of Responsibility (NOR) only issued by the DEP on RTN 3-33735 on May 26, 2017? And why is the content related to the oil spill on 343 Summer, when it was dealt with previously as RTN 3-0034098? Why was an NOR not issued to 351 Summer LLC on RTN 3-0034098? No NOR for RTN 3-0034098 has been posted to the DEP website, since the property changed hands.*

While not relevant to the RAM Plan, an NOR was issued to 351 Summer LLC for RTN 3-34098 on February 24, 2017.

ATTACHMENTS

Comment on *the:* ***Release Abatement Measure Plan May 18, 2017 (RAM) Produced by EnviroTrac, Ltd***

Need for Additional Testing Adjacent to Residential Properties

At the community meeting at the Kennedy Elementary School on May 17, it was explained that no soil testing had been conducted near the northern boundary of the property adjacent to residential properties because the brush had been too thick at the time of the surveys. (This area is marked as *Brush Too Thick For Survey* on the map on p. 284 of the Release Abatement Measure Plan.)

In the meantime, the brush had been cleared from the site. After discussion at the meeting, there was general consensus that additional testing should be conducted in this area.

Please assure that additional soil testing occurs in this area, and that results are shared with the community prior to any additional site work.

Thank you.

Submitted by:

Bob Dempkowski

39 Hawthorne Street

June 11, 2017

Robert H. Bird, LSP

From: Catherine Guthrie <cmguthrie@sbcglobal.net>
Sent: Sunday, June 11, 2017 10:22 PM
To: Robert H. Bird, LSP; Iris Davis (DEP); Karen Stromberg; Jeffrey Nangle
Cc: Catherine Guthrie; Joe Tierney; bob dempkowski; Tomas Bok; philip groth; Mary Gray; Vito Lore; Denise Provost - Rep. (HOU); Lance Davis; GProakis@somervillema.gov; Karina Wilkinson; Bill White; Dennis Sullivan; Carol Dempkowski; oshea-iappini@rcn.com
Subject: Public comment on 343-349 & 351 Summer St Somerville (RTN 3-33735 and 3-34098)

Hi All,

Here are comments and questions from our household at 48 Hawthorne Street. I hope this isn't too casual given what else I've seen today!

Comment on 343 & 351 Summer Street Draft Release Abatement Measure Plan

Our property at 48 Hawthorne Street abuts this site, so we have several questions/comments:

Will you give us and our neighbors the name and phone number of the site manager (or whoever is on call) so that we can call – and speak to a real person -- with concerns if, for instance, site work starts too early, goes on too late, or trucks leave the site uncovered?

Likewise, can you please provide us and our neighbors with the name and direct number for the City employee whose job it is to oversee that this project and this developer is in compliance?

What will be done if another underground storage tank is breached during excavation? Will we be alerted? If so, when and how?

We request further soil testing as has been requested by some of our neighbors.

Who is in charge of the dust monitoring plan?

I'd like to reiterate Joseph Tierney's request for clarification on how you got to the 8,000 cubic yards of soil number. Could you please explain?

I'd also like to underscore Karina Wilkinson's request that construction abides by the City's noise ordinance of starting no earlier than 9am on Saturdays and no work on holidays. And that no truck trips take place during morning rush hour, from 7am to 9am. Per the traffic management plan, the trucks will exit down Willow Ave or (worse) through the middle of Davis Square to reach Dover. Both routes are typically extremely busy during rush hour leading to multi-block back ups. Running trucks during morning rush hour will result in idling as the trucks inevitably sit in morning traffic. The City could easily avoid this scenario by limiting the hours drivers are allowed to make trips.

The next two points stray from the RAM plan but are important to us nonetheless so we are mentioning them here:

Because our property (48 Hawthorne Street) abuts the construction site, we will undoubtedly be covered in dust before this project is complete. (I understand that you will wet the soil as it is removed but surely this will not prevent dust, dirt, and grime from spreading.) Will the developer establish an account with a local exterior home and window cleaning company with enough funds set aside so that those with property abutting the site can have their exteriors, including windows, cleaned afterward.

Finally, can we have the developer's assurances that he will not cut down the trees growing on our back property line, shared with the VFW parking lot? The trees provide shade as well as a much-appreciated visual buffer. With 29 condos being constructed a few feet from our house, we will soon be staring into the living quarters of dozens of new residents. For their sake and for ours, the trees provide a priceless sense of privacy in what is a stressful, cheek-to-jowl urban environment. Plus, they are habitat for the birds and squirrels that populate our back yard. I would like to meet with the developer personally, show him the trees, and get his assurances that the trees will not be taken down. I would like for the trees to be clearly marked with either tape or ribbons so that workers don't "accidentally" take them down.

Submitted June 11, 2017

Mary Gray, 48 Hawthorne Street, Somerville, MA

Catherine Guthrie, 48 Hawthorne Street, Somerville, MA

Robert H. Bird, LSP

From: oshea-iappini@rcn.com
Sent: Sunday, June 11, 2017 11:02 PM
To: iris davis; Robert H. Bird, LSP; Karen Stromberg
Cc: oshea-iappini
Subject: PIP Questions

Evening,

Who has liability for 343 and 351 currently? Who will have liability after issuance of a building permit?2 Who has indemnityfor 343 and 351 currently? Who will have lliabiliy after issuance of a building permit?

What depth underground was UST when struck on 343?
how far northwards did the oil release spill ?

Why is only 18 inches of 343-349 to be removed
Since all contaminated soil is not being removed How much contamination will be left at the 343-349 Summer Street
What is the toxicity of soil left ?

Regards,

George O'Shea

Questions based on the: **Release Abatement Measure Plan May 18, 2017 (RAM) Produced by EnviroTrac, Ltd**

The site to which the above RAM is directed consists of two parcels referred to as "351 Summer Street" and "343-349 Summer Street". A Release Tracking Number (RTN) 3-33735 report exists for 343-349 Summer, and a RTN 3-34098 exists for 351 Summer. It is clear from the past use of these two parcels for automotive related activities, (gasoline filling station in the case of 351, and auto repair including storage of fuel and other hydrocarbon based liquids at 343-349), that both parcels have been subject to possible soil contamination processes in their history.
At the present time the subject RAM deals with a more recent accidental oil spill (343-349 Summer, RTN 3-33735) as well as measured contamination from lead and benzo(a)pyrene exceeding MCP RCS-1 levels (351 Summer, RTN 3-34098).

Questions:

1. The remediation work described in the RAM describes the work in response to RTN 3-33753 as a result of a damaged underground storage tank, (e.g. removal and testing of 8,000 cubic yards of contaminated soil), but what is the detailed response to RTN 3-34098 and the measured contamination at 351 Summer?

2. What entity is responsible for seeing that procedures of the RAM are followed? Is it the responsibility of: Robert H. Bird LSP No. 8972, 351 Summer LLC the owner, or the City of Somerville? The neighborhood has already observed many truckloads of uncovered contaminated soil from 343-349 Summer traveling through our streets last August (and September?).

3. How will the results of the "ground penetrating radar" studies reported on in the RAM plan, which show several possible sites that may contain old underground storage tanks, be acted upon to prevent long term leakage and continuing contamination? Can someone provide us with a layperson's explanation of what was in that report? How can we be confident that all substantial remaining UST's are either non-existent or not leaking?

4. Since lead at 431 mg/kg and benzo(a)pyrene at 2.65 mg/kg are serious soil contaminants with severe public health consequences, why are there no additional measurements to be made concerning possible contamination that may be affecting abuttors along the northern boundary with Hawthorne Street, and the eastern boundary on Summer Street?

5. Who will supervise day to day monitoring of the "Dust Monitoring Plan" in appendix C of the RAM (page 177/284 and following)?

6. Who will initiate the "Mitigation Measures" that are specified in appendix C when monitoring shows non-compliant measurements?

7. Who determines that the "Mitigation Measures" have been successful and work can resume?

8. If violations of procedures described in the RAM plan are observed by abuttors and neighbors of this project, who or what agency can be addressed for immediate and effective action?

9. Appendix D, "Focused Risk Assessment," is aimed at protecting workers on-site at 343-351 Summer Street. Where are similar descriptions of the precautions that need to be taken to protect abuttors on Hawthorne and Summer Streets, during the construction period and following?

10. The development about to be undertaken at 343-351 Summer Street involves very serious soil contamination that needs remediation to protect: residential abuttors and neighbors; on-site workers and; future residents of the new housing units. These dangerous conditions must be successfully alleviated where success is defined as "soil contamination well under standard accepted environmental safety levels.

Questions based on the: **Traffic Management Plan May 26, 2017 (TMP)**
Produced by EnviroTrac, Ltd

1. The amount of soil to be remediated because of the presence of Lead (level on 351 Summer at 431 mg/kg), and benzo(a)pyrene (level on 351 Summer at 2.7mg/kg) by supervised removal to approved off-site locations is not clearly spelled out. At the top of page 2 the TMP states: "Therefore, the preliminary Disposal Site Boundary for this RTN encompasses the entirety of both the 343-349 and 351 Summer Street parcels from ground surface to a depth of approximately 15 feet bgs and is depicted on **Figure 2**. " following up on this statement will produce (at 0.93 acres for the two lots, and a depth of 15 feet), 22,506 cubic yards of soil. If all of this soil needs to be carefully transported elsewhere for disposal it will require (at 15 cubic yards per three axle truckload) 1500 truck trips. Can you please go from that figure and show clearly how it has been determined that only 8,000 cubic yards of soil need to be transported off-site without exposing abuttors, workers on the site, and final occupants of the project, to serious hazard?

2. To preclude three axle trucks from wandering in the vicinity of Powderhouse and Davis Squares and Mystic Avenue, because of the ambiguous or incorrect directions let me offer the following corrections:
In the first section "Access route to the project site" line 1. Should indicate Exit 31 South, not Exit 30. Line 3. Should be augmented to indicate "continue straight across Powderhouse Square onto College Avenue" In the section "egress from the project site" line 4. Should read "travel for 0.22 miles to Powderhouse Square". Line 5. Should read "turn right onto Warner Street" I don't believe it is called Harvard St. at that place.

3. On page 6 Section 6.0 Project Contacts, the following is stated: "The list of contact names and numbers will be submitted to, and maintained with, the Planning Department

and the Ward Alderman prior to the start of construction. " Please see that this list is circulated at least to site abuttors if not the entire neighborhood before excavation begins so that any complaints may be dealt with in a way that minimizes danger to all involved.

Submitted by Joseph Tierney, 35 Hawthorne Street Unit 2, Somerville.
June 10, 2017

Robert H. Bird, LSP

From: Marc Maxwell <marcamaxwell@gmail.com>
Sent: Thursday, June 08, 2017 2:48 PM
To: Robert H. Bird, LSP
Cc: Karen.Stromberg@state.ma.us; GProakis@somervillema.gov
Subject: Re: 343-351 Summer Street RAM Comments

Bob: Thank you for your neighborhood presentation a few weeks ago. In regard to the RAM and site excavation, clearing and Hazardous Materials removal from the 343-351 Summer Street site, I wish to offer the following comments:

I am a near abutter to the property, living and owning the two family house at 18-20 Windom Street, Somerville, MA. I am concerned about both the RAM and the Construction Management Plan for the proposed development of the Summer Street site. Your presentation brought to the forefront the magnitude of the excavation and hazardous materials removal contemplated for the site. My concerns include:

1. How the hazardous and non-hazardous materials will be excavated from the site and the amount of dust, mud and debris that may be made friable, liquid or dry dust limited from migrating off the site. How will such potentially hazardous dust and debris be controlled?
2. What procedures will be put in place to assure that proper dust, mud and debris mitigation is in fact the rule on the site to minimize exposure to the neighborhood?
3. What procedures and compliance methods will be put in place to keep dust, dirt, mud and potential water run-off from migrating onto the public streets and sidewalks surrounding the site? Who and how should we inform in case we have concerns or evidence of non-compliance or unintended dust or run-off?
4. What is the route on and off the site for the myriad of trucks and heavy equipment that will be required to execute this excavation and hazardous material removal? While there are only so many options for public streets surrounding and accessing the site, those of us who live on the small one way surrounding streets fear the traffic, dust and dirt of 400 +/- triple axle dump trucks traversing our residential streets. My personal fear is that Windom Street will be used a short cut to turn right on Elm Street, to Cutter to Highland Avenue for trucks headed towards I-93 to the north. Vehicles darting across Summer Street from the Post lot to Windom Street is already a problem.
5. Will a washing station be provided on site for hosing down wheels and undercarriages of trucks and equipment leaving the site?
6. How will dirty, muddy, soil rich or contaminated water be handled from the site (either from a washing station or simply from rain) without running into Summer Street, gutters and curbs, and the surrounding storm drainage system?
7. Will duct covers be required for clean fill, contaminated soils and hazardous materials departing the site and traveling through our thickly settled residential neighborhoods?
8. Who will insure compliance with approved procedures?
9. Will hazardous or contaminated materials ever be excavated and stored on site? If so, what measures will be taken to assure minimal exposure to residents abutting the site or pedestrians traversing the neighborhood?
10. The neighborhood has asked repeatedly and never been given an understandable answer as to how the MBTA tunnel affects site drainage, surface or underground, and how this has been figured into the site excavation, drainage, contaminated soil or hazardous material handling, removal, storage or transportation from the site.

11. Who will be our contact to report issues we feel make the neighborhood unsafe during this process of excavation and hazardous material removal?

Thank you in advance for your assistance on these questions and issues and for your continued consideration of the health, safety and well-being of the neighborhood.

Sincerely,

Marc Maxwell

18-20 Windom Street

Somerville, MA 02144

617.623.3366

On 5/30/2017 9:52 AM, Robert H. Bird, LSP wrote:

> Hi Marc,
>
> You can send you comments to me by email with a copy to Karen Stromberg of MassDEP (Karen.Stromberg@state.ma.us) or by First Class or Registered Mail to the address in the footer.
>
> Thank you for your courtesy,
>
> Bob

-----Original Message-----
From: Marc Maxwell [mailto:marcamaxwell@gmail.com]
Sent: Tuesday, May 30, 2017 9:20 AM
To: Robert H. Bird, LSP <robertb@envirotrac.com>
Subject: 343-351 Summer Street RAM Comments

Bob: I attended the public meeting regarding this project and wanted to send comments. Can you help me out with where public comments are to be sent. The State DEP website was down over the weekend when I tried to find it. Thanks, Marc

Robert H. Bird, LSP | Principal Hydrogeologist | EnviroTrac Ltd. | 2 Merchant Street Suite 2, Sharon MA 02067
781.793.0074 (Office) | 781.793.7877 (Fax) | 508.244.7111 (Cell) | robertb@envirotrac.com |
vCard<http://www.envirotrac.com/vcard/RobertBird.vcf>

Solutions in Action - http://www.envirotrac.com

[http://www.envirotrac.com/imgs/email.jpg]
[http://www.envirotrac.com/imgs/isn.gif]
[http://www.envirotrac.com/imgs/pics.jpg]
[http://www.envirotrac.com/imgs/twic.jpg]

Response to RAM Draft Plan for 343-349 and 351 Summer Street, Somerville, MA

Mass DEP RTC 3-33735 and 3-34098

By Nancy Iappini, 36 Hawthorne Street, Somerville, MA, 02144

June 10, 2017

I. Tests requested

1) We request groundwater, soils and GPS testing at rear lot line location (shared lot line of 36 Hawthorne and 343-349 Summer because the location is clearly a sensitive area relative to human health as per DEP standards.

   a) Please test 36 Hawthorne Street, rear lot line - The nature and extent of IRA-related conditions has not been adequately addressed. As abutters to 343-349 where a sudden release of oil occurred in August 2016, my family and I request that Mr. Bird test the soil and groundwater on my property to substantiate his statement that my land has not become contaminated by either said release or other pre-existing environmental conditions. Mr. Bird has refused to test my property and has not produced evidence to corroborate his position that my property was not contaminated when the oil tank was ruptured by his client. Could Mr. Bird please render his professional opinion and a binding statement of fact that my property has not become contaminated.

   b) Please test both sides of the shared lot line of 343-349 Summer and 36 Hawthorne with Ground Penetrating Radar and groundwater monitoring and testing - Mr. Bird stated at the PIP meeting that GPS and groundwater testing has not been done on 343-349 Summer Street at the shared lot line. Figures 1 and 2 in Mr. Bird's RAM draft indicate the same.

   Mr. Bird avoided my questions at the PIP meeting about testing at the rear property line. He stated his refusal to test groundwater there, but Mr. Nangle stood and requested that he do so. The Geophysical Survey for USTs indicates that no testing was done at my property line due to "brush too thick" (as noted in RAM plan's GPS survey Figures 1 and 2, site maps). This leaves a large area of untested soil and groundwater on the IRA parcel of 343-349 Summer Street, which is unacceptable for the health and safety of my family. This leaves a large gap in the data gathered for this parcel which could greatly affect or alter the RAM plan tasks outlined. We expect an LSP to have a thorough and systematic approach to testing all the land, and it is more than reasonable to perform this testing on both sides of the lot line. Everywhere on the site has been tested site except for this one location.

   Contrary to the Geophysical survey claim that there was "too much brush," please see my Exhibit 1 containing a) photos taken on April 25, 2017 illustrating the bulldozed lot, thereby removing all brush in order to conduct GPS. No brush was in the way for HGI to do their work at the rear, shared property line on 343-349 Summer; and b) emails to me from Mr. Maggiore, developer and Mr. Proakis, City of Somerville confirming that the lot was being cleared in order to perform GPS. The Hager GeoScience Inc Geophysical Survey for USTS of May 16, 2017 attached to the RAM plan falsely indicates brush too thick. It is a flagrant abdication of duty that Mr. Bird did not test there and that Mr. Nangle did not require it. Absence of testing at that location denies us knowledge of contamination status and whether there are any USTs in that location. Because no thick brush is or was present to cause any impediment to access this location and for the sake of health and safety we request GPS testing be done on both

sides of the shared lot line before construction commences, with results shared and incorporated into the RAM plan.

Mr. Bird had received the GPS test results the morning of the PIP meeting but decided against bringing them to the PIP meeting, despite their obvious importance and relevance. This tactic denied the public the opportunity to discuss the results of GPS at the PIP meeting.

My rear property line could be an area of potential suspected impact. To fully assess potential human exposure for abutters from the soil present or migrating from the site, the tests requested above must be performed. It is a fact that residents and trespassers may encounter soil COCs present in or migrating from the Site during redevelopment.

Additionally, due to Mr. Bird's confirmation that the direction of the groundwater on the site is unknown (a statement corroborated by MBTA engineers and the City of Somerville Engineer Robert King and Planning Director George Proakis), excluding precise tests at the rear lot line is a serious oversight for full disclosure. Can successful site cleanup without harm to abutters be substantiated with data with such a large area of the site is excluded from testing; if so how?

c) How can it be determined that said standards have been reached when a large portion of the land has not been included in the assessment? (as per page 9, 11.1 Site Assessment (310 CMR 40.0442(3)(a) of RAM plan). The portion of land at the shared lot line has been excluded from the site assessment area, calling into question how the technical standards set forth in 310 CMR 40.0800 and 40.900 can be considered to be achieved.

d) How do we know that there are no USTs in that location in absence of GPS performed along the shared lot line of 36 Hawthorne Street and 343-349 Summer Street?

Any known conditions could be further exacerbated by unknown conditions as a result of the fact that these tests were not performed at the rear lot line. This could lead to a failure to sufficiently evaluate conditions or skew findings by excluding this one certain physical area (i.e., the rear lot line) repeatedly from Mr. Bird's tests.

e) How do we know the shared lot line area on either side is not a Hot Spot?

II. Questions correlated to main RAM plan document

1. Questions correlated to statements in draft Release Abatement Measure Plan main document:

a) p. 6, 4.3.2 – Onsite Reuse, Transport and Reuse, of Off-site Soil Disposal: Will contaminated soil be re used on site?

b) p. 6, 4.3.3 & 4.4 – Stockpiling, Toxicity Characteristic

- It appears on Figure 2 Site Plan that close to 30 soil borings were performed but only 14 soil samples submitted for TCLP lead analysis – why, and why were they submitted only for lead since there are other toxins exceeding reportable conditions? Will the complete set of soil samples be submitted for analysis? If they have already been, please share results with neighbors/DEP.
- Will stockpiling of contaminated soil take place? If so when and for how long?

If it is allowed, we request that it be located on 351 Summer Street near the VFW building, not near the rear property line of Hawthorne Street, not near humans and domestic animals.

Will it be transported offsite: if so at what point, and if not, why not. Will there be onsite reuse of

it determined to be safe enough to be below reportable levels? We request sampling of stockpiled soil please and share results with neighbors/DEP.

c) 4.4 - Implementation schedule –

- Could timely notifications be provided to neighbors before site activities take place, so that we can shut our windows, expect activity or noise, watch for dust or take precautionary measures, etc. Summer 2017 is too vague a start date. Please also provide notification to neighbors/DEP when RAM activities end.
- Please provide contact information for questions or concerns from neighbors or in the event of an emergency. Who is the Project Manager?

d) 5.2 – Similar Soils Management
- Has a disposal facility approved under MSRs been identified that will take the soil – who is it?
- Who determines whether the soil is suitable or unsuitable for construction or redevelopment?
- How is it determined?

e) 10.0 Other info – We request that, upon review of the initial draft RAM plan, the Mass DEP review and identify any other information or suggestions to help ensure health and safety for the neighbors and families regarding this clean up.

f) Page 10, 11.3 – Planned remedial activities to excavate impacted areas and dispose of impacted soil have omitted the soil along the shared lot line of 36 Hawthorne Street and 343-349 Summer Street. Please include the soil at the shared lot line in any testing or removal.

III. Questions correlated to RAM Plan Addendums, tables, figures, appendices

1. Questions correlated to Figure 2 = Site Plan:
   a) Why is the disposal site boundary considered 'preliminary' on both RTNs? What could change about these boundaries and why?
   b) If 5 tons of soil was removed, why is there more to be removed?
   a) We request that the soil management plan and traffic management plan by Mr. Bird be part of the RAM plan.
   b) What are the dimensions of the oil spill causing the IRA? Are the limits of the plume area indicated in the RAM plan? If so, where, and, if not, could Mr. Bird please provide this information.
   c) Please explain what the green area (called test pits in Figure 2 legend) is. What was tested? Please explain what the circled area is (called preliminary disposal site). Is the green area in figure 2 where the oil spilled? Is the green area in figure 2 the extent of oil spill contamination?

2. Appendix B Health and Safety Plan –
   a) Page 8 references potential heat stress conditions in warmer weather. Please tell me how your work plan and mitigation techniques help my domestic pets (and me and my family when we are home during site activities) with heat stress when we have to be in an enclosed indoor environment due to the clean up?

3) Appendix C Dust and Vapor Monitoring Plan - Do not offer much about dust control and protection to the residents.
   a) What will be done on a windy day?
   b) What type of barrier will be put up to protect families especially abutters at the rear shared lot line?
   c) Are vapors expected to be a problem for this site? Do they exist? Will they occur?
   d) Page 1, 1.0 - Please provide a more specific 'schedule for work to be conducted' at the site in the RAM

e) Please describe how the water or foam is applied to suppress vapor and dust?
f) Why is the word "Vapor" not included in the title of this attachment? What vapors are expected, as noted in 3.0 Mitigation Measures on p.2?
g) We request that neighbors/DEP be timely informed of the perimeter monitoring levels for air and dust and vapors. What is considered an elevated dust particle concentration? What is considered an elevated vapor concentration?
h) Would vapor reduction measures along the rear property line be included? If not, please explain why not. If so, please state what they will be and who is in charge of running them and reporting on their results;
i) Section 1.1 Dust monitoring - Hours of site work are suggested to be 7 am to 5 pm daily except Sundays. If site work results in dust moving around up till, for example, 5 pm daily, but monitoring is stopped at 5 pm because the workers are done for the day, will the dust take time to settle? If so we request monitoring during that settle period. Will work cease before 5 pm to stop dust movement? How can watering down get particles that have not yet settled if workers depart?

4) <u>Questions correlated to Appendix D - Focused Risk Assessment in Support of Construction Release Abatement Measure:</u>

Tables on Page 3 has show the Hazard Index and Excess Lifetime Cancer Risk for a construction worker, a potential future resident, and a potential future trespasser. *It is concerning to note that the future resident has 4x the cancer risk and hazards of the construction worker.* Yet Mr. Bird's plans address only the construction worker.

a) Why is nothing stated in this plan about existing butters and neighbors of close proximity? Please provide the same cancer risk information for abutters and neighbors of close proximity. What are our risk assessment numbers for HI and ELCR?

Exhibit 1

RCN Webmail **oshea-iappini@rcn.com**

RE: Hi Matt - what is the work being done today on the lot?

From : Matt Maggiore <matt@maggiorecos.com> Tue, Apr 25, 2017 03:56 PM

Subject : RE: Hi Matt - what is the work being done today on the lot? 1 attachment

To : oshea-iappini@rcn.com

Hi Nancy

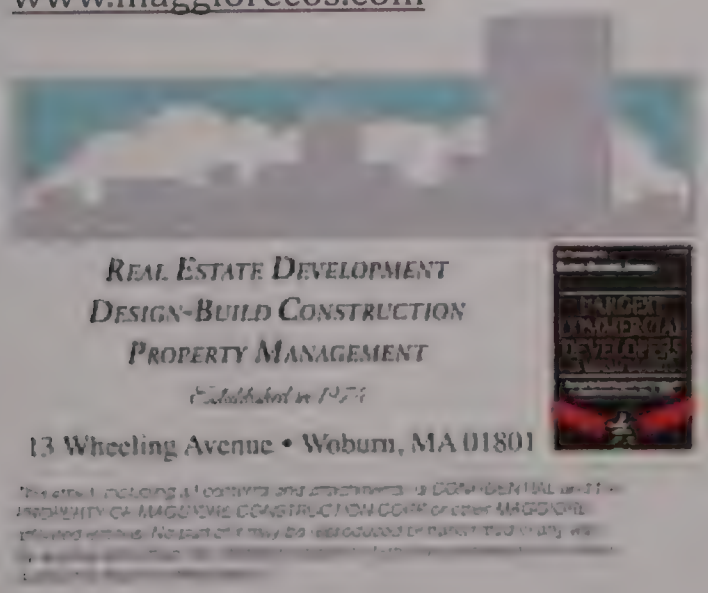
We are cleaning up debris and overgrowth.

My site crew is 100% fully aware of the plan adjacent to your property line. All we are doing there is cutting down the weeds and brush on our side of the fence.

No heavy equipment will be in that area. I promise!

Thanks
Matt

MATTHEW P. MAGGIORE, PRESIDENT
THE MAGGIORE COMPANIES
Office 781 935 6100
Cellular 781 718 2005
Fax 781 933 8044
matt@maggiorecos.com
www.maggiorecos.com



From: oshea-iappini@rcn.com [mailto:oshea-iappini@rcn.com]
Sent: Tuesday, April 25, 2017 3:33 PM
To: Matt Maggiore <matt@maggiorecos.com>
Subject: Hi Matt - what is the work being done today on the lot?

thank you.
Nancy

image001.jpg
13 KB

Re: Pics of Bulldozed lot

From : George Proakis <GProakis@somervillema.gov> Tue, Apr 25, 2017 09:51 PM

Subject : Re: Pics of Bulldozed lot

To : oshea-iappini@rcn.com, Kelly Como <KComo@somervillema.gov>

Cc : Goran Smiljic <gsmiljic@somervillema.gov>, Hans Jensen <hjensen@somervillema.gov>

Hi Nancy,

It is my understanding that the builder is clearing brush and fences in preparation for conducting Ground Penetrating Radar (GPR) tests on the site. Although GPR is not a requirement at this time for our local permits or state review, the applicant determined that it would be prudent to do the testing and collect the results prior to the PIP meeting. To complete GPR they are required to clear some trees and fences.

No building permit is required for this work. ISD is aware of the work. As you know, no building permit has been issued at this time.

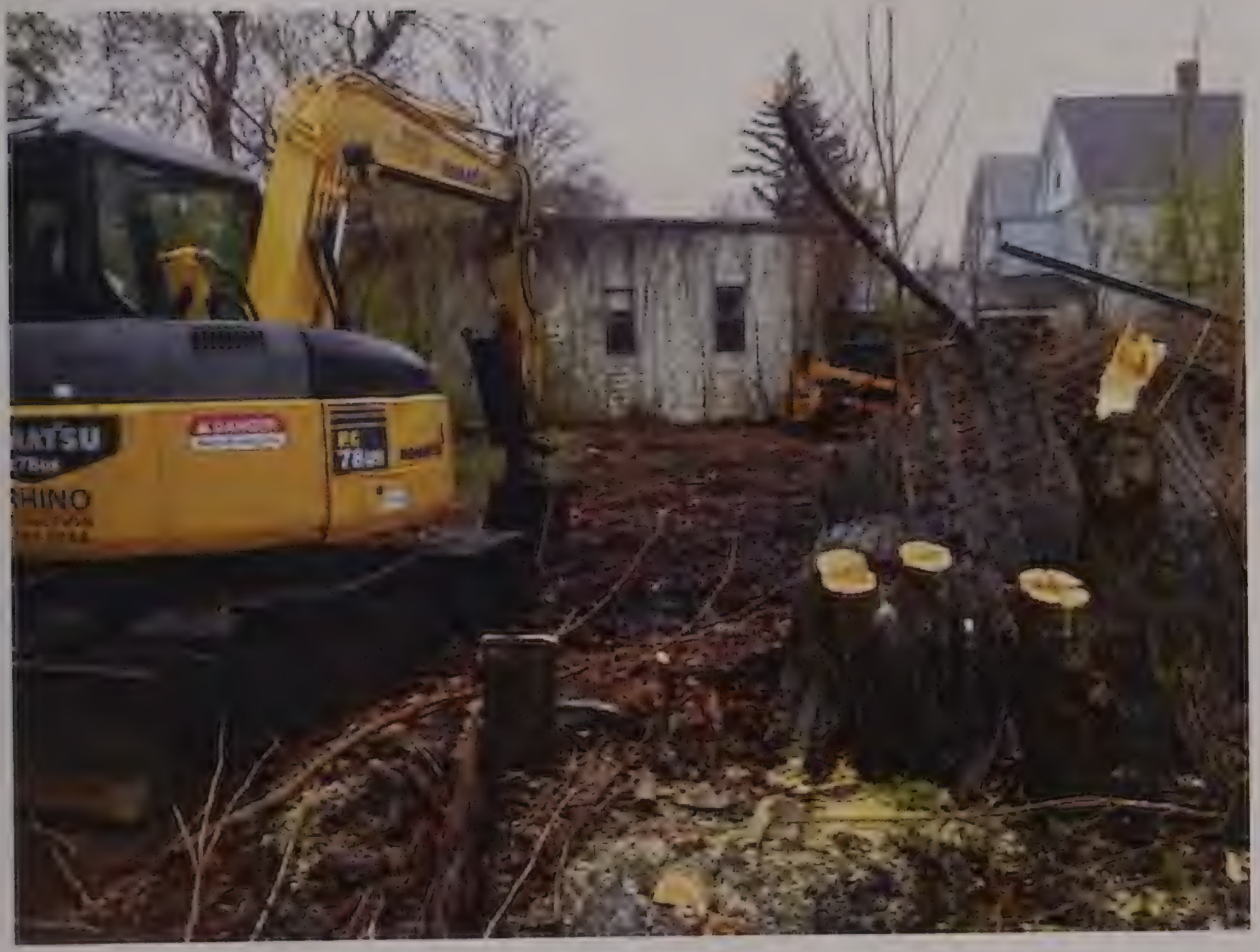
Thanks,
George

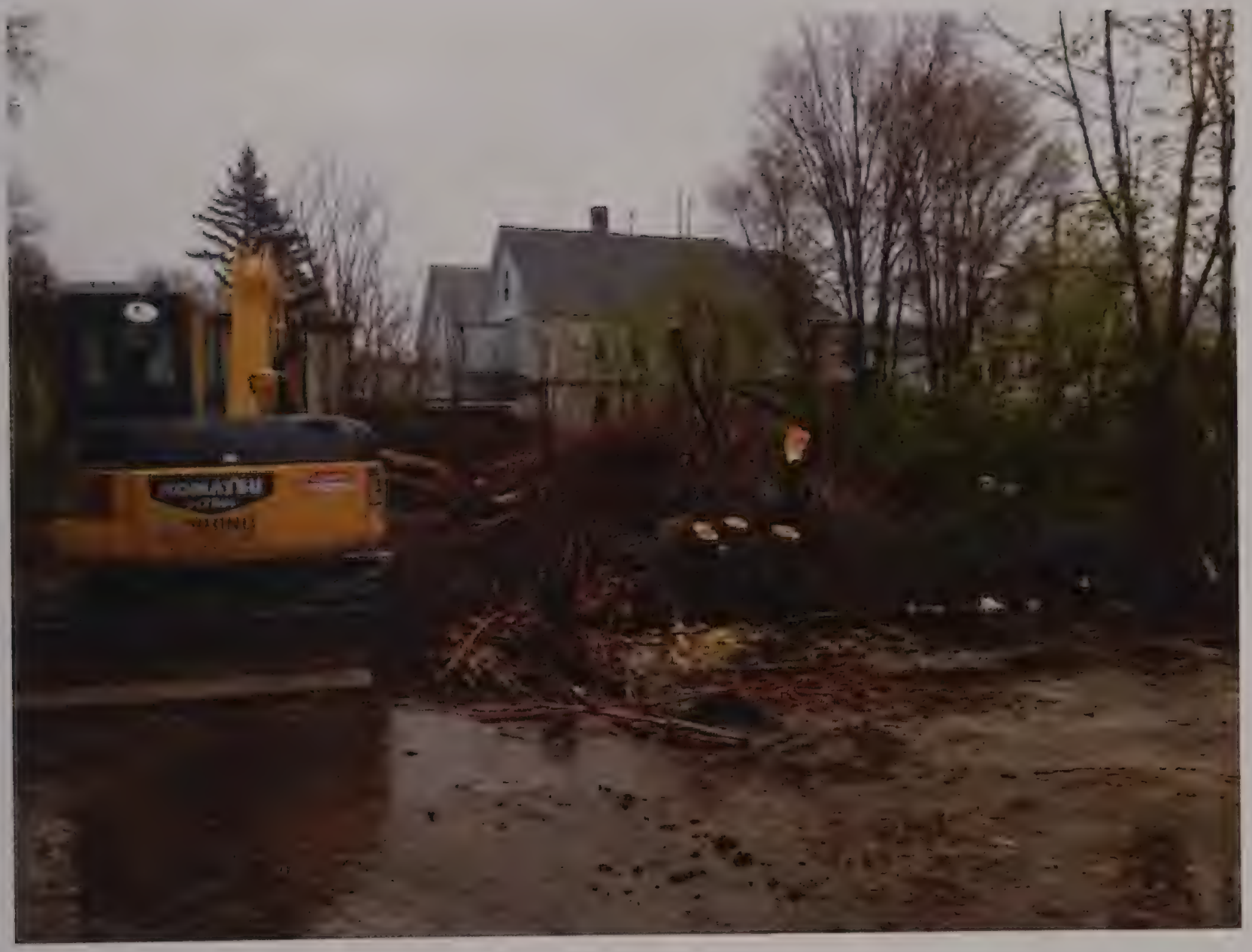
From: oshea-iappini@rcn.com <oshea-iappini@rcn.com>
Sent: Tuesday, April 25, 2017 3:58 PM
To: George Proakis; Kelly Como
Subject: Fwd: Pics of Bulldozed lot

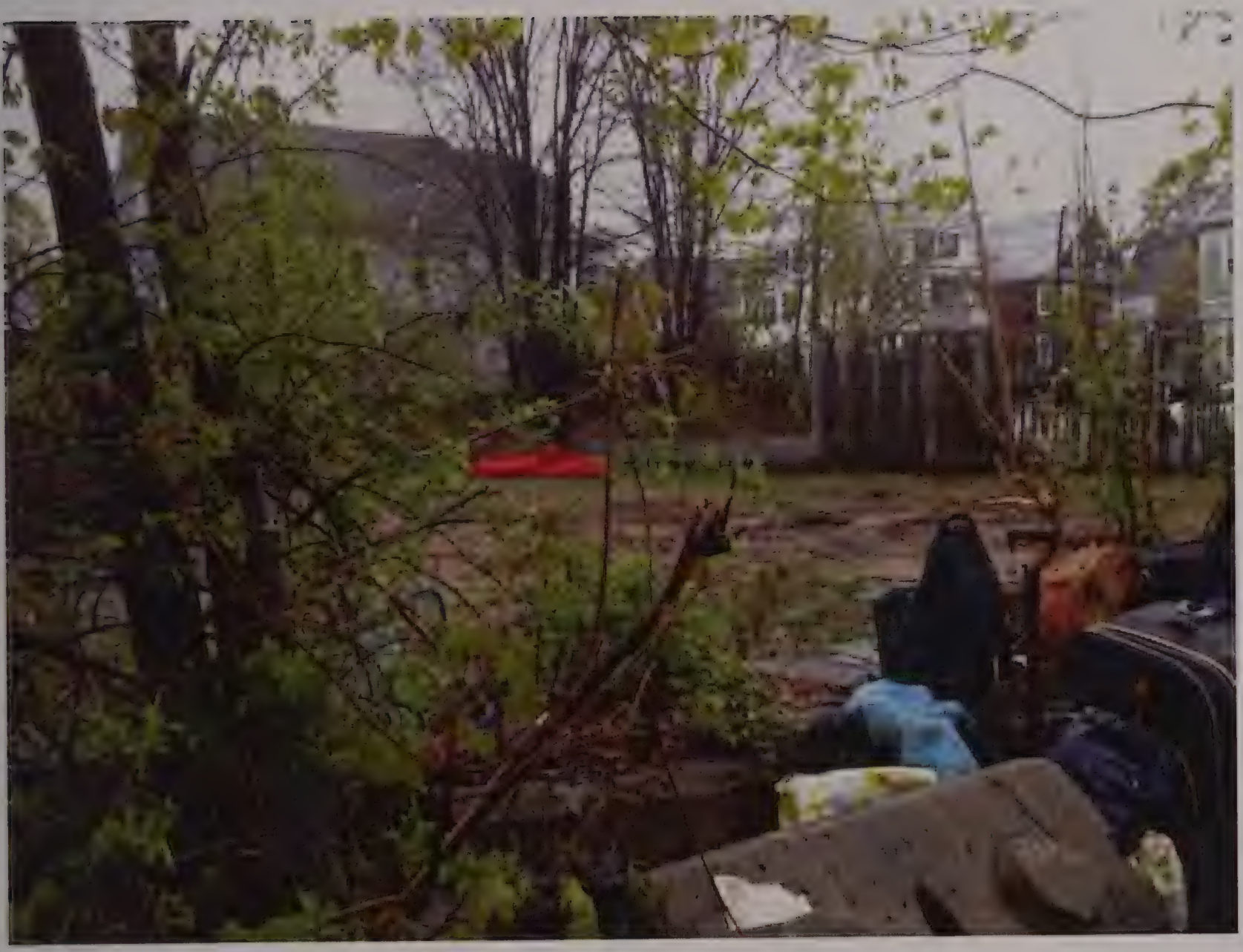
George and Goran,

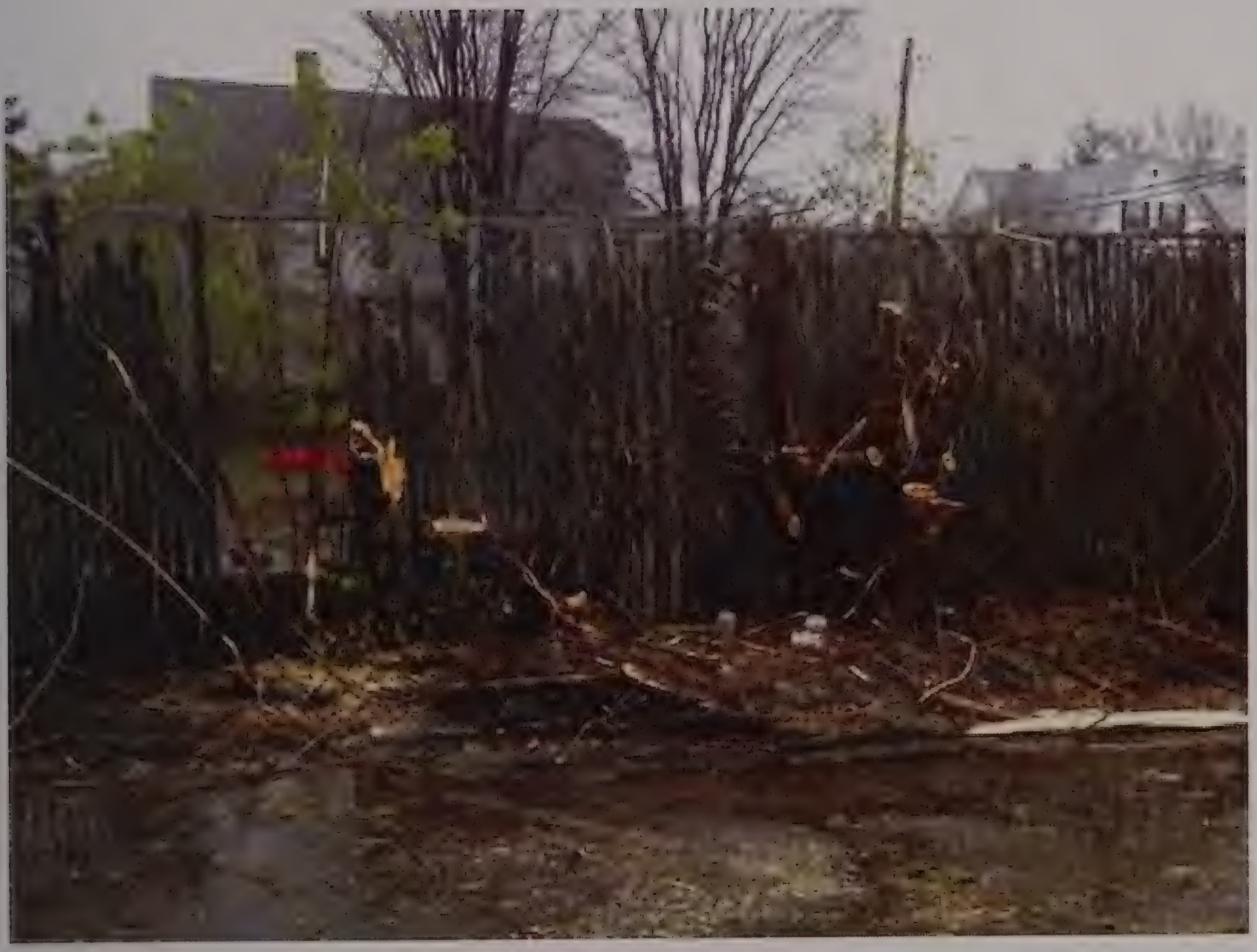
The neighbors want to know what is going on the lots at 351 and 343-349 Summer Street?! No building permit has been issued according to ISD. Environmental remediation and clean up not completed. Who is doing this work and what is the goal of it?

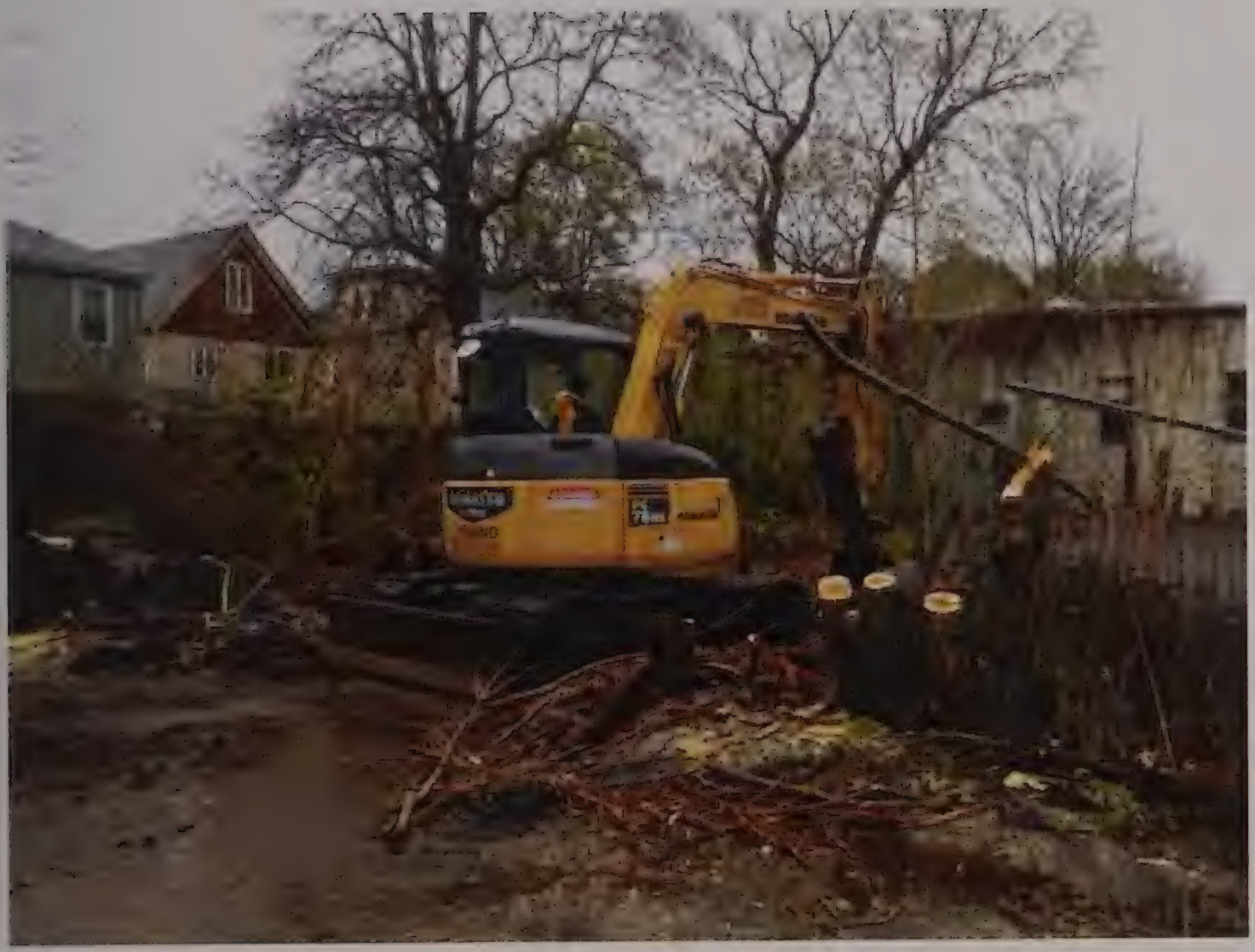
thank you,
Nancy Iappini




KOMATSU







Robert H. Bird, LSP

From: Tomas Bok <tomas.j.bok@gmail.com>
Sent: Sunday, June 11, 2017 10:25 PM
To: Iris Davis (DEP); Robert H. Bird, LSP
Cc: oshea-iappini@rcn.com; Karen Stromberg; Denise Provost - Rep. (HOU); Lance Davis; GProakis@somervillema.gov; Karina Wilkinson; Bill White; Dennis Sullivan; Jeffrey Nangle
Subject: Re: RAM Plan - public comments - 343-349 & 351 Summer St Somerville (RTN 3-33735 and 3-34098)

I live at 335 Summer Street, on the same block as the 343-351 Summer Street site, and I would like to submit public comments on the RAM.

As the parent of 2 young children, I am concerned about the potential for hazardous compounds from the site to affect my property during excavation and transportation of contaminated soil. I want to inquire about the safe transportation of soils containing carcinogens such as benzo(a)pyrene. As dump trucks load at the site and drive past my house, what measures will will be in effect to control/contain dust and contaminants from the soil so that they don't end up in my yard where my children play? And with all of the vehicle traffic and the need to wash tires of every vehicle, what measures will be used to prevent contaminants from migrating to the street, sidewalk, and gutter?

In 2011, Mr Nangle recommended groundwater analysis to determine the flow of groundwater. Has this analysis been completed per his suggestion? What assurance can be provided that contaminants are not leaching into the groundwater beneath our neighborhood?

How will the transportation company be monitored to ensure compliance with the stipulations of the plan? Will they be required to hold special licenses or certification for proper handling of contaminated soil?

Who is supervising the RAM and cleanup process? Who can we contact in the event that we have questions or want to report issues?

Respectfully,

Tomas Bok
335 Summer Street
Somerville MA 02144
tomas.j.bok@gmail.com

On Sun, Jun 11, 2017 at 7:38 PM, <oshea-iappini@rcn.com> wrote:

> Good evening,
>
> Please find attached my comments. I look forward to your response.
>
> Nancy Iappini
> 36 Hawthorne Street

Comment on 343 & 351 Summer Street Draft Release Abatement Measure Plan

The draft Release Abatement Measure plan covers two parcels referred to as "351 Summer Street" and "343-349 Summer Street." Through a public records request, I also obtained EnviroTrac's Traffic Management Plan (TMP), dated May 26, 2017 (attached).

My concerns and requests related to the RAM and TMP plans are as follows:

1) The RAM plan states (4.3.4) that 14 soil samples were tested using "Toxicity Characteristic Leaching Protocol" under the Resource Conservation and Recovery Act (RCRA) and none of the results met the "hazardous waste criteria of 5.0 mg/l in TCLP leachate." Nevertheless, Table 5 shows that soil bore test B102 had a level of 431 mg/kg which exceeds the Environmental Protection Agency's (EPA) lead hazard standard for children under 6 years old, which is 400 parts per million.[1] The City of Somerville, the Massachusetts Department of Environmental Protection (DEP), the developer and consultants should proceed with **a plan that acknowledges that the soil is hazardous to children under 6 years old, according to the EPA hazard standard.**

2) The preliminary Disposal Site Boundary as outlined in Section 2.2 of the RAM for Release Tracking Number (RTN) 3-34098 includes all .93 acres of the two properties and goes to 15 feet down. That encompasses some 22,500 cubic yards of soil, not including the 5 tons that were removed following the oil spill that occurred on 343-349 Summer Street on August 8, 2016. *How was it determined that 8,000 cubic yards should be removed?* That leaves some 14,500 cubic yards of soil, which contains lead, benzo(a)pyrene and polycyclic aromatic hydrocarbons in reportable concentrations.

3) In the TMP, it is stated there will be approximately 400 to 600 truckloads of excess soil (3.2.3) that will be transported from 7am to 3pm, except Sunday. In the "Hours of Operation" section, it is stated that "If work is to be done on Saturdays or state/federal holidays that work shall not begin before 8:00am." The consultant is mistaken about the current construction noise ordinance for the City of Somerville which provides that construction can start **no earlier than 9am on Saturdays, and no work can be done on holidays**.

4) Diesel truck trips contribute to air pollution. We request that **no truck trips take place during the weekday rush hour from 7am to 9am**. Rush hour will increase the time it takes for the trucks to get to the site and, therefore, increase the concentrations of ground-level ozone and fine particulate matter generated by the trucks. Both ozone and particulate matter are regulated by the Clean Air Act, because they negatively impact the health of people with respiratory problems, including asthma, and particulate matter additionally negatively impacts the health of people with heart disease. The EPA has set a standard for "Good" air quality at an Air Quality Index (AQI) from 0 to 50 for both ozone and particulate matter. Because of the likelihood that 15 to 30 truck trips per day will contribute to ground-level ozone and particulate matter (assuming that the transport is distributed evenly over the 20 to 30 work days), we request that **no trips be allowed on days when the DEP is forecasting an AQI above 50 for either ozone or**

---

[1] P. 1211, EPA 40 CFR Part 745 Lead; Identification of Dangerous Levels of Lead, *available at:* https://www.gpo.gov/fdsys/pkg/FR-2001-01-05/pdf/01-84.pdf

[2] The two remaining categories are "Very Unhealthy" (201 to 300) and "Hazardous" (301 to 500),

particulate matter, since the truck exhaust could push the area from "Moderate" (51 to 100) into "Unhealthy for Sensitive Individuals" (101 to 150) or "Unhealthy" (151 to 200).[2] Also, the soil excavation itself will contribute dust particles on top of the diesel exhaust from the trucks. Without conducting a systematic survey of the neighbors, we are nevertheless aware of 6 neighbors within approximately 350 feet of the location with asthma or respiratory problems. Three of them are children and one senior adult has severe asthma.

5) *At peak staffing, where will the construction workers' vehicles be parked? What commitment is the developer willing to make beyond "encouraging carpooling"?* (TMP 3.2.1)

6) *Where will the trucks be staged for deliveries?* The TMP outlines an area in Medford to stage the trucks for the soil excavation but does not mention where the delivery trucks will be staged. **Trucks should not be allowed to idle.** We request that deliveries be on a "just in time" basis to the site and there be **limitations on the timing of deliveries to avoid peak traffic periods.** (3.2.2)

7) We request further **testing of the soil near the adjacent houses on Hawthorne Street**, as has been requested by some of the neighbors.

8) In the Dust Monitoring Plan (Appendix C, 2.1 Daily Monitoring), it needs to be clarified that **daily monitoring will take place during excavation** as well as for "the duration of construction." As air samples will be taken daily, they should include **tests for ground-level ozone and fine particulate matter** to determine whether the work is bring the neighborhood to unhealthy levels as discussed in point 4.

9) In the Focused Risk Assessment's Data Usability Assessment Conclusion section (Appendix D, 5.7.1), it says that "it is the opinion of the Licensed Site Professional named herein that the analytical data obtained from samples collected during investigations associated with RTN 3-33735 and considered in the risk characterization meet CAM requirements," that is, the Compendium of Analytical Methods. RTN 3-33735 relates to 343- 349 Summer Street. RTN 3-0034098 covers 343 - 351 Summer Street. *Where is the assurance that the data "to support this risk characterization," that is [No Significant Risk], includes 351 Summer Street*?

10) *Why was a Notice of Responsibility (NOR) only issued by the DEP on RTN 3-33735 on May 26, 2017? And why is the content related to the oil spill on 343 Summer, when it was dealt with previously as RTN 3-0034098? Why was an NOR not issued to 351 Summer LLC on RTN 3-0034098?* No NOR for RTN 3-0034098 has been posted to the DEP website, since the property changed hands.

Submitted June 11, 2017

Karina Wilkinson, 35 Hawthorne Street Unit 1, Somerville, MA.

Roger Schwarzschild, 35 Hawthorne Street Unit 1, Somerville, MA

---

[2] The two remaining categories are "Very Unhealthy" (201 to 300) and "Hazardous" (301 to 500), *available at:* https://airnow.gov/index.cfm?action=aqibasics.aqi